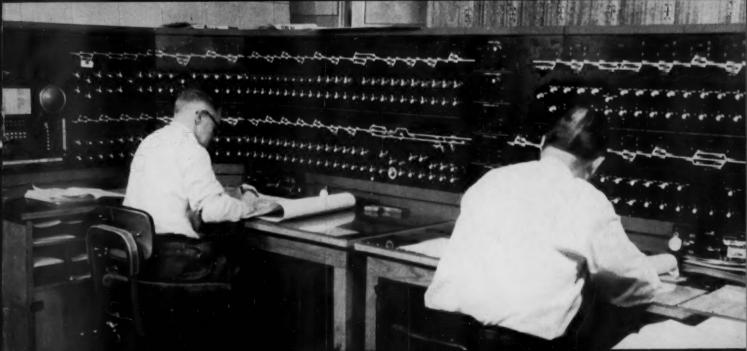
This Yard Tower Lets You <u>See</u>

September 15, 1958

RAILWAY AGE weekly



† How to get more from your CTC...p. 42

Report on Dargw's New Rail Section

60 cents A Simmons-Boardman TIME SAVER Publication



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6 MAJOR REASONS WHY LEADING REFRIGERATOR CAR LINES SPECIFY Streamlite HAIRINSUL

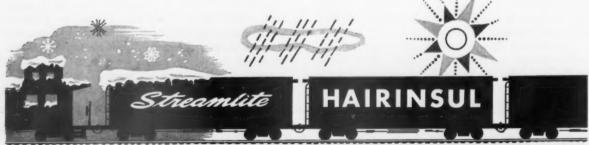
- LOW CONDUCTIVITY. Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity—.25 btu per square foot, per hour, per degree F., per inch thick.
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East gets boost in rate casep. 9 ICC wraps up Ex Parte 212 by ruling on accessorial charges, changing some line-haul rates. Eastern roads will be main beneficiaries of net additional revenues of \$12,000,000 a year.

Job freeze: ORT wins the first round.....p.10 A federal judge has stopped, until Sept. 19, a threatened strike against the C&NW by the Telegraphers—but he has ruled that the point under dispute, stabilization of employment, is a bargainable issue.

D&RGW's new rail section saves moneyp.16 The Rio Grande wanted a rail section custom tailored for its particular type of operation. Result: a 106-lb rail section developed in cooperation with Colorado Fuel & Iron. Director of Research Ray McBrian tells why the new section promises substantial savings.

WP gets 'see through' yard towerp.22 Open-type support for the road's new facility at Stockton, Calif., doesn't obtruct the view of train crews operating at ground level. The entire vard operation is visible from the centrally located tower, which was constructed in 14 working days.

How to get more from your CTCp.42 Consolidation of centralized traffic control machines can considerably reduce railroad operating expenses. Many such consolidations can pay for themselves in two years or less.

Fifteen to get Harriman Awardsp.48 Outstanding safety records in 1957 win E. H. Harriman Memorial Awards for 15 railroads and affiliates.

Uniform container system proposedp.50 Fruehauf will soon start producing multi-purpose containers designed for use on flatcars, trucks and ships.

The Action Page—Dividends from the M/W forces......p.54 Maintenance forces traditionally have been regarded as a millstone around the neck of cost-conscious management. Given the necessary support and encouragement, however, M/W departments can help make profits for the shareholders.

Short and Significant

ICC Commissioner Robert W. Minor . . .

has resigned from the Commission to go to the New York Central as its vice president-law. Mr. Minor, who is 38, was the young-



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Week at a Glance CONT

Current Statistics

•	
Operating revenues, seven m	
1958	
1957	
Operating expenses, seven m	
1958	
1957	4,812,497,958
Taxes, seven months	
1958	502,862,761
1957	627,828,840
Net railway operating income,	seven months
1958	299,720,126
1957	519,061,429
Net income estimated seven n	nonths
1958	200,000,000
1957	397,000,000
Average price 20 railroad sto	cks
Sept. 9, 1958	88.28
Sept. 10, 1957	96.39
Carloadings revenue freight	
Thirty-five wks., 1958	19,582,670
Thirty-five wks., 1957	24.284.774
Average daily freight car sure	olus
Wk. ended Sept. 6, 1958	40,687
Wk. ended Sept. 7, 1957	16,490
Average daily freight car short	
Wk. ended Sept. 6, 1958	1,872
Wk. ended Sept. 7, 1957	1,971
Freight cars on order	.,
August 1, 1958	25.994
August 1, 1957	85.229
Freight cars delivered	33,227
Seven months, 1958	31.658
Seven months, 1957	59.136
	07,130

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est man ever named to the ICC when he joined the agency in February 1956. At the NYC, he will succeed Garrard W. Glenn, who is rejoining the law firm of Lord, Day & Lord where he was a partner before joining the railroad in 1954.

Successor to Mr. Minor at ICC . . .

will be Charles A. Webb, 41, legislative assistant to Senator Bricker (R.-Ohio). Mr. Webb, a native of Virginia, will receive a recess appointment running to December 31. Normal procedure will be for the White House to reappoint him for a complete term after Congress convenes in January.

Rock Island has moved into lowa . . .

with a large-scale station closing, or dualization, petition. Some 50 one-man operations are involved. Savings, RI says, would be substantial. Hearings are scheduled to open in mid-October, will be held at three Iowa cities during the month.

Freight rate reductions . . .

on iron and steel products have been proposed by some 30 midwestern roads. The cuts, affecting eight states, would amount to 20 to 33 cents per 100 lb. It's a double-barrelled move, aimed at obtaining more revenue and at meeting truck competition. The proposal was filed to become effective Oct. 15.

Canadian freight rate hike proposals . . .

may come in two parts: an interim increase to cover potential increases in wage costs, and a further boost to aid rail revenues. The figures being mentioned: 18 per cent interim, perhaps 15 per cent additional. Application may be made within the week. Behind the action is a conciliation board report recommending wage hikes which, if applied to all railway employees, would cost an estimated \$60,000,000 annually. The railways haven't accepted or rejected the board's report. First, they say, it must be determined if the money to pay the increases can be found.

Agreed charges for U.S. railroads?

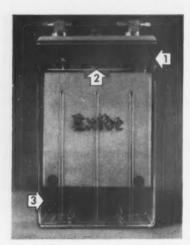
Maybe, some day. Traffic committees continue to study them (RA, Sept. 1, p. 7). A meeting in Chicago last week brought traffic men and National Industrial Traffic League representatives together on this and other subjects. Meantime, Pocahontas roads have established a rate on coal for a Virginia power company with this proviso: if 1,500,000 tons are shipped by rail in a "base year," a healthy per ton discount takes effect. The rate was designed to offset the possibility that the power company would build a new plant atop a coal mine.

Nebraska's "save-the-train" movement . . .

hasn't given up yet in its attempt to keep C&NW's Omaha-to-Chadron passenger train running, even though the train has been discontinued under orders of the State Supreme Court. Next step: an appeal to the U.S. Supreme Court.



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longer under high load. It is less subject to internal heating. And its life potential is significantly prolonged.

With this new design, Exide engineers have succeeded in making the world's most famous long-life battery even better. When you order batteries for float or cycle service in stationary applications, get the most value for your money. Specify Exide-Manchex. For detailed information, write Exide Industrial Division, The Electric Storage Battery Company, Phila. 2, Pa.



East Gets Boost in Rate Case

Final ICC decision in Ex Parte 212 means added revenue, largely for eastern roads. Commission wraps up case by ruling on accessorial charges, changing some line-haul rates. New revenue figures out to \$12,000,000.

Most of the added revenue that will accrue to railroads as a result of last week's final ICC decision in Ex Parte 212 will go to eastern roads.

Not too much is at stake, considering the comprehensive nature of the case. An interim decision last February authorized higher line-haul rates calculated to yield around \$183,500,000 annually. Another \$8,000,000 in increased accessorial charges was also approved.

Now, in pushing the case to a conclusion, the commission has allowed new increases, principally in accessorial charges, that will produce another \$22,000,000 a

But that is not the whole story. Last week's decision terminated the interim nature of the February increases; but, in so doing, the commission has disapproved or cut back some of the line-haul increases that were allowed to go into affect at that time.

Effect of these changes is to trim an estimated \$10,000,000 off the original \$183,500,000 figure. So the net gain from last week's decision becomes \$12,000,000.

That eastern roads stand to receive most of this is apparent from figures in the report. The \$22,000,000 increase in accessorial charges consists of \$12,600,000 on water-borne traffic, and \$9,400,000 on loading and unloading at eastern ports, mainly New York and Philadelphia.

The commission estimates that threefourths of the new revenue in water-borne traffic will be received by railroads at North Atlantic ports—Norfolk, Va., and north.

Eastern carriers will share with others, however, the job of adjusting line-haul rates to trim the \$10,000,000 off what the commission authorized last February.

These sources of traffic will be primarily involved—livestock and pig iron, scrap iron and steel.

• The carriers originally proposed a 3 per cent boost in livestock rates with a 5-cent minimum. That became effective in February. Now the commission has set a 3 per cent increase with no minimum. Effect will be to cut back revenues by an estimated \$1,300,000 annually.

• On pig iron, scrap iron and steel, the roads proposed a 40-cent-per-ton increase. The commission has authorized a 3 per cent boost, with a 40-cent maximum. Since the higher railroad proposal

has been in effect from February, estimated cost of this cutback is figured at \$8,700,000.

Shippers can, of course, seek refunds to the extent they have paid the higher rates for seven months. Procedure for obtaining such refunds was set up in the commission's February report; shippers can deal directly with individual railroads on the basis of copies of bills they've paid during the period.

Rates on many commodities are left as originally proposed by the carriers. No increases are allowed, however, on wool and mohair or on scrap paper and rags. Increases less than proposed are authorized on oyster shells, fly ash, clay farm drain tile—in addition to the livestock, pig iron, scrap iron and steel.

The higher accessorial charges authorized last week permit, for the first time, establishment of loading and unloading charges at Philadelphia and New York. For so-called simple service, the

charge will be \$2.86 per net ton; for complete service, including sorting, checking and the like, \$4.09 per net ton. The new charges apply only to perishables at Philadelphia but at New York they apply to both perishables and dry packaged freight.

Other eastern cities already have a loading-unloading charge. In authorizing the New York-Philadelphia setup the commission said charges at these other points could be raised to the same level.

The water-borne traffic proposal filed by the railroads, and suspended last February, provided a new charge of 6-cents per 100-lb to be added to line-haul rates on export, import, coastwise and intercoastal freight moving through all U. S. ports. There were several exceptions—including grain, coal or coke in bulk, and others.

Last week the commission approved the proposal as filed, holding that this kind of increase would cause minimum (Continued on page 50)



Business as Usual — But How Long?

Some 8,000 commuters a day were still riding Erie and New York Central ferries last week, hopeful that a three-judge statutory court would grant an injunction preventing scheduled discontinuance of the ferries over the weekend. The court's decision was due Fri-

day. The injunction was requested in an effort to halt the discontinuance pending a trial before the same court on a petition by New Jersey's attorney general and Board of Public Utility Commissioners challenging the legality of the 1958 Transportation Act.

Job Freeze: ORT Wins the First Round

The Order of Railroad Telegraphers has won the important first round of a budding battle over "stabilization of employment."

The decision of Federal District Judge Joseph Sam Perry—in Chicago & North Western's suit to prevent a strike by the ORT and to retain management's right to decide the size of a railroad's work force visibly jolted rail labor circles last week.

The court order, delivered in Chicago Sept. 8, contained elements of victory for both sides—but most of the points went to the union. The order further complicated the already tangled procedures by which railroads and unions dispose of irreconcilable disputes.

Specifically:

• Judge Perry stopped the strike—but only until Sept. 19. However, he ordered the ORT not to strike until an appeals court has a chance to rule on the case.

• He made "stabilization of employment" a bargainable issue, at least insofar as the ORT's proposed stabilization rule is concerned. C&NW had contended that bargaining over the rule wasn't proper under the Railway Labor Act.

• He ruled that the dispute over the proposed rule is major in character and thus should be handled through the National Mediation Board. C&NW (as has Minneapolis & St. Louis in a similar instance) had gone for a determination of bargainability to the National Railroad Adjustment Board.

 And he ruled, in effect, that each time a federal mediator reenters a dispute with the consent of both parties, and later withdraws, a new 30-day cooling-off period begins.

North Western attorneys last week were preparing an appeal. And industry observers—including a significant sprinkling of rail presidents—were asking each other how this turn of events would affect both North Western's central agency programs, which triggered the dispute, and the broad future aspects of labor negotiations as well.

There seemed general agreement that Judge Perry hadn't come to grips with the broad issue of management's responsibility to determine the size of its labor force. Eyes began to turn toward the Seventh Circuit Court of Appeals, which began its current session in Chicago the same day.

The dispute grew up in this way: Last December, the ORT served on C&NW a proposed rule requiring that "no position in existence on Dec. 3, 1957, will be abolished or discontinued except by agreement between the carrier and the organization." The date predates North Western's regulatory victories with central agency programs in South Dakota and Iowa. North Western regarded the rule as non-bargainable and agreed only to discuss ways of cushioning the effect of the layoffs ordered by the state commissions. Contending that the road wouldn't negotiate, the ORT called a strike for Aug. 21 (RA, Sept. 1, p. 9).

Judge Perry placed what the ORT calls a "stabilization" rule and C&NW calls a "job freeze" well within the bounds of bargainability.

bargainability:

"The proposed contract change . . . relates to the length or term of employment as well as stabilization of employment. Collective bargaining as to the length or term of employment is commonplace. There are a variety of collective bargaining provisions in the railroad industry relating to stabilization of employment as such, including provisions for severance allowances, supplemental unemployment compensation benefits and guaranteed employment. . . . Contract provisions substantially identical to the rule prepared by the defendant telegraphers are in existence on at least two railroads."

Earlier, Judge Perry had criticized the National Mediation Board for not informing the President, when no settlement could be reached, that an emergency existed. Moreover, he said, the board has an obligation to determine whether an issue such as the proposed rule is covered by the terms of the Railway Labor Act. This, he declared, the board didn't do.

The proposed rule was "not a matter to be submitted to the Adjustment Board because any matter to be submitted there ultimately results in arbitration, and I don't believe that we have reached the state yet, certainly under our statutes, that labor agreements will be settled by arbitration," he said.

The court's decision has no immediate effect on North Western's South Dakota and Iowa agency programs, though it might cast a cloud over similar petitions pending in Minnesota and Wisconsin as well as over the station-closing aspect of North Western's attempt to overhaul its Chicago commuter service.

Watching Washington with Walter Taft

Mr. Taft is on vacation. During his absence, this column is being written by other members of the staff.

• EARLY USE of one provision in the 1958 Transportation Act can be expected, now that the ICC has ruled in Ex Parte 212. That's the provision aimed at speeding intrastate rate adjustments, bringing them to interstate levels. In the past, there sometimes have been long delays. Now the commission has primary jurisdiction, must act with "special expedition" when an intrastate rate case is filed.

• PLAN 3 PIGGYBACK could get an unexpected boost from the West Coast trucking strike. Pinched by the strike, shippers are urging the ICC to lift its suspension of forwarder rates that would help put Plan 3 in business in a bigger way.

THE FORWARDER RATES were filed with effective dates beginning Aug. 13. Actually, the rates are not solely for t-o-f-c movements: forwarders point out they would apply in box cars, too. The rates are at motor carrier levels, on transcontinental volume shipments westbound. Some new points and destinations are added. ICC suspended the rates

until March 12, 1959. A hearing has been set for Oct. 1.

BIG ARGUMENT over the forwarder proposals was set off by motor carriers. They contend, among other things, that the new rates would constitute an invasion of the trucking field. Forwarders say, in turn, that trucker interests seem to seek a monopoly on shipments they choose to call "truckload" traffic.

LATEST PLEA for lifting the suspension comes from the NIT League. The League—along with the Los Angeles Chamber of Commerce—has urged the ICC to lift its suspension, at least during the pending strike. The league argues, in effect: continue the investigation if you wish, but let the rates become effective meanwhile.

• SLOW ORDER continues on the job of assembling a staff to carry out the broad transportation study authorized in S. Res. 303. An initial \$100,000 appropriation for the study expires next January 31; but a spokesman for the committee says no staff appointments for making the study will be made "until after the November elections."



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CF&I

PROPERTIES OF SECTIONS

	SECTIONS		COMPARISON OF		
ITEM	100 RE	CF&I 1060	100 RE TO CF&I 1060		
AREA: HEAD	3.80 Sq. In.	4.00 Sq. In.	+ 5.3%		
WEB	2.25 Sq. In.	2.50 Sq. In.	+ 11.1%		
BASE	3.90 Sq. In.	3.95 Sq. In.	+ 1.3%		
TOTAL	9.95 Sq. In.	10.45 Sq. In.	+ 5.0%		
Weight per yard	101.5 lbs.	106.6 lbs.	+ 5.0%		
G.T./mile — single track	159.50	167.5	+ 5.0%		
N.T./mile — single track	178.64	187.6	+ 5.0%		
Moment of Inertia (1)	49.00	53.6	+ 4.6"4 + 9.4%		
Section Modulus, Head	15.1	16.1	+ 1.0"3 + 6.6%		
Section Modulus, Base	17.8	18.8	+ 1.0"3 + 5.6%		
Ratio, "I" to Area	4.9	5.1	+ 0.2 + 4.1%		
Ratio, Section Modulus to Head Area	1.5	1.5	SAME		
Distance, Base to N.A.	2.75"	2.85"	+ 0.10"		

Comparative maximum web stresses in the CF&I and A.R.E.A. rail sections, calculated in accordance with the method recounted in the A.R.E.A. Proceedings, Vol. 48, pages 987-991.

psi

AREA

Weig

Section Section Ratio, Ratio,

106 CF&I 18,700 100 RE 27,300 46%











Fishing and Base Dimensions of 119 CF&I and 115 RE are identical. JOINTS FOR 119 ALSO FIT 115 RE.

CF&I













PROPERTIES OF SECTIONS

	SECTIONS		COMPARISON OF		
ITEM	115 RE CF&I 1190		115 RE TO CF&I 1190,		
AREA: HEAD	3.91 Sq. In.	4.32 Sq. In.	+ 10.5%		
WEB	3.05 Sq. In.	3.04 Sq. In.	- 0.3%		
BASE	4.29 Sq. In.	4.29 Sq. In.	SAME		
TOTAL	11.25 Sq. In.	11.65 Sq. In.	+ 3.6%		
Weight per yard	114.7 lbs.	118.8 lbs.	+ 3.6%		
G.T./mile — single track	180.7	187.0	+ 3.5%		
N.T./mile — single track	202.4	209.4	+ 3.5%		
Moment of Inertia (I)	65.6	71.4	+ 5.8"4 + 8.8%		
Section Modulus, Head	18.0	19.4	+ 1.4"3 + 7.8%		
Section Modulus, Base	22.0	22.9	+ 0.9"3 + 4.1%		
Ratio, "I" to Area	5.83	6.13	+ 0.3 + 5.1%		
Ratio, Section Modulus to Head Area	1.6	1.7	+ 0.1 + 6.3%		
Distance, Base to N.A.	2.98"	3.124"	+ 0.144"		

Comparative maximum web stresses in the CF&I and A.R.E.A. rail sections, calculated in accordance with the method recounted in the A.R.E.A. Proceedings, Vol. 48, pages 987-991.

psi

13%

119 CF&I 13,400

115 RE 15,200



---132 RE

PROPERTIES OF SECTIONS

	SECTIONS			
ITEM	132 RE	CF&I 1360		
AREA: HEAD	4.42 Sq. In.	4.86 Sq. In.		
WEB	3.66 Sq. In.	3.62 Sq. In.		
BASE	4.87 Sq. In.	4.87 Sq. In.		
TOTAL	12.95 Sq. In.	13.35 Sq. In.		
Weight per yard	132.1 lbs.	136.2 lbs.		
G.T./mile — single track	207.4	213.7		
N.T./mile — single track	232.3	239.4		
Moment of Inertia (I)	88.2	94.9		
Section Modulus, Head	22.5	23.9		
Section Modulus, Base	27.5	28.3		
Ratio, "I" to Area	6.8	7.1		
Ratio, Section Modulus to Head Area	1.7	1.8		
Distance, Base to N.A.	3.2"	3.347"		

Comparative maximum web stresses in the CF&I and A.R.E.A. rail sections, calculated in accordance with the method recounted in the A.R.E.A. Proceedings, Vol. 48, pages 987-991.

		psi	
136	CF&I	10,800	
132	RE	13,300	23%

COI	MPARISON	OF
132 R	E TO CF&	1 1360
+	10.0%	
date	1.1%	
	SAME	
+	3.09%	
+	3.10%	
+	3.04%	
+	3.06%	
+	6.7''4	+ 7.6%
+	1.4"3	+ 6.2%
+	0.8"3	+ 2.9%
+	0.3	+ 4.4%
+	0.1	+ 5.9%
+	0.147"	

Fishing and Base Dimensions of 136 CF&I and 132 RE are identical. JOINTS FOR 136 ALSO FIT 132 RE.

CF&I

COMPARISON OF THREE CF&I SECTIONS RELATIVE TO A. R. E. A. SECTIONS BASED ON ACTUAL SIZE.

THE COLORADO FUEL AND IRON CORPORATION

Denver, Colorado





MODEL P-45-A PORT-ABLE RAIL SURFACE GRINDER: Powered by 4-cycle, air-cooled gasoline engine developing 7½ hp at 2600 rpm.; Adjustable V-belt drive acts as overload release.

MODEL X-60 PORT-ABLE CROSS GRIND-ER. Powered by 4-cycle air-cooled gasoline engine developing 3.4 hp. Hand-actuated lock control lever allows easy alignment with rail joint.

Do Your One-Man Jobs Faster with Low Cost RTW Grinders

These light weight, portable grinders are ideally fitted to your one-man rail end joint grinding jobs. They do the job faster, with less operator fatigue. Vibration is reduced to a minimum because the engines are mounted on rubber bushings. Designed for long life at low initial and operating cost, they give greater accuracy in performance with a minimum of skill and effort. Their portability makes them especially useful for maintenance work in heavy traffic areas.

Model P-45-A, a cup wheel grinder, is mainly

used for grinding welded rail ends and for removing mill tolerance and mill scale before heat treating rail ends. It leaves a very smooth and highly polished surface.

Model X-60, cross grinder or slotting machine, quickly removes overflowed metal at rail points. It is also used with out-of-face rail end welding crews and for cross grinding rail ends behind the crews.

RTW Grinders are designed and engineered by specialists in track maintenance equipment.

Write today for complete details.

Railway Trackwork Co.

3207 KENSINGTON AVE., PHILADELPHIA 34, PA.

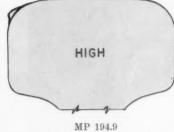
TRACK MAINTENANCE MACHINERY

Rail Grinders Switch Grinders Cross Grinders Surface Grinders Rail Drills Cross Cutters

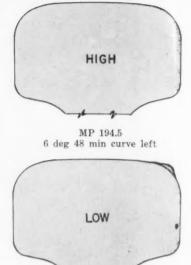
Bollast Extruders
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Cut-off Wheels
Tie Handlers
Irack Liners

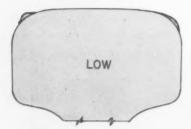


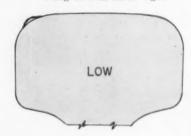
MP 196.1 2 deg 031/2 min curve right



4 deg 00 min curve right



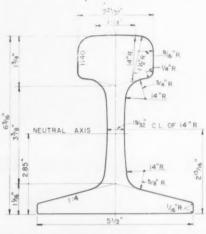






Here Are Typical Wear Graphs Of the 106-lb Rail

The rail cross sections above are reproductions of typical rail wear file graphs of the 106-lb rail in service on the D&RGW. All the graphs were made in July 1958. The 106-lb rail in the vicinity of Mile Posts 194-196 was laid in 1956. That in the vicinity of Mile Post 778 was laid the following year. The 1956 rail has carried about 12 million gross tons of traffic. That laid in 1957 has carried about 5 million tons



CROSS SECTION of the CF&I 106-lb rail. It was designed to offer considerable savings, both in first cost and in actual usage. The rail was first installed by the D&RGW in 1956.

Why New

By RAY McBRIAN Director of Research Denver & Rio Grande Western

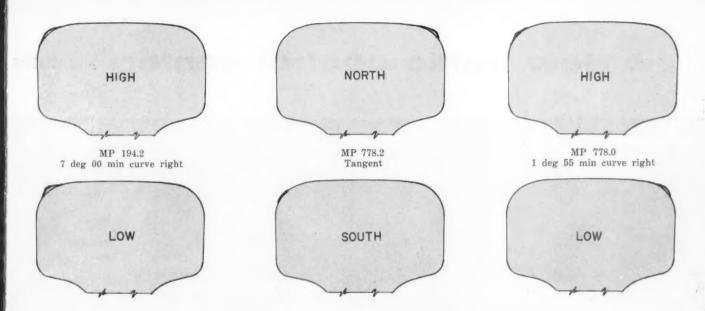
It has long been my belief that there should be possible savings in rail costs with diesel operation through the use of a rail section designed to fit the type of operation we have. Through the cooperation of the Colorado Fuel & Iron Corp., a 106-lb section was developed which we feel will afford substantial economies in both tangent and curved territory.

The thought that prompted the D&RGW to consider the possibility of a rail section in the 100-lb-per-yd range is the realization that rail designs should be developed which will offer substantial savings. A further thought was the fact that, for diesel operation with the resultant lighter stresses in rail, there should be considered a new rail section for such operation, which would offer the possibility of considerable

More specifically, in the design of the 106-lb section we were motivated, as was CF&I, by a desire to develop a rail section having improved structural design properties, which would be measurably comparable to the 112-lb RE and the 115-lb sections, and superior to the 100-lb RE

Comparison of Properties of Different Rail Sections

Item		119 CF&I	115 RE	112 RE	106 CF&I	100 RE
Area:	Head	4.32	3.91	3.95	4.00	3.80
(sq in)	Web	3.04	3.05	2.77	2.50	2.25
(-4)	Base	4.29	4.29	4.29	3.95	3.90
	Total	11.65	11.25	11.01	10.45	9.95
Weight per Yard		118.8	114.7	112.3	106.6	101.5
G. T / Mile		187.0	180.7	176.5	167.5	159.5
N. T /Mile		209.4	207.4	197.6	187.6	178.0
Momen of Inertia (Verl	tical)	71.4	65.6	65.5	53.6	49.0
Sect on Modulus, Head		19.4	18.0	18.1	16.1	15.1
Section Modulus, Base		22.9	22.0	21.8	18.8	17.8
Ratio ' I" to Area		6.13	5.83	5.9	5.1	4.9
Rat o, Sec. Mod., Head	to Area	1.7	1.60	1.6	1.5	1.5
Distance Base to N. A.	(in)	3.124	2.98	3.0	2.85	2.75
Maximum Web Stress (psi)	13,400	15,200	22,653	18,696	27,267
	(2	0,000-lb Load -	34 in Eccer	ntricity)		



D&RGW Rail Section Saves Money

The road adopted and began installing the Colorado Fuel & Iron 106-lb rail section in 1956. Improved structural design properties afford definite economical values in weight savings when compared with heavier sections. The rail installed in 1956 has carried approximately 12 million gross tons of traffic. Profile graphs show wear pattern is practically nil.

section. Having such properties, the new section, it was felt, would afford definite economical values in weight savings when compared with the heavier 115, 119, 132 and 136-lb sections.

When the new 106-lb section is compared with the 100-lb RE and the 119-lb CF&I sections, and with the 112-lb RE and the 115-lb RE sections, its physical properties are found to be most attractive. It compares favorably with the heavier 115-lb RE and the 119-lb CF&I sections, and is definitely superior to the 112-lb RE and the 100-lb RE Sections. The accompanying table gives a comparison of the physical properties of the different sections.

It is interesting to note that the new section has considerably less web stress than the 100-lb RE and the 112-lb RE sections. The comparative web stresses as given in the table were calculated in accordance with the method described in the AREA Proceedings, Vol. 48, pages 987-991. The maximum web stresses incident to comparable loading indicates a 46 per cent greater stress in the 100-lb RE section than in the 106-lb section, and a 21

per cent greater stress in the 112-lb RE than the new section. Also, the area of the head metal (4.00 sq in) is slightly greater than that of the 115-lb RE section (3.91 sq in) and greater than that of the 100-lb RE section (3.80 sq in).

Based upon the physical properties of the rails considered for use by the D&RGW, it can be seen that this new 106-lb section as designed offers considerable merit for usage. It was adopted by our road in 1956. In that year, 7.547 miles were laid, Mile Post 194.03 to 201.50. In 1957, an additional 14.66 miles were laid.

Curvatures and Grades

In the territory where the rail was laid in 1956, maximum curvature is 7 deg and the maximum grade is 1.09 per cent. In the territory where the rail was laid in 1957, maximum curvature is 1 deg and the grade 0.05 per cent.

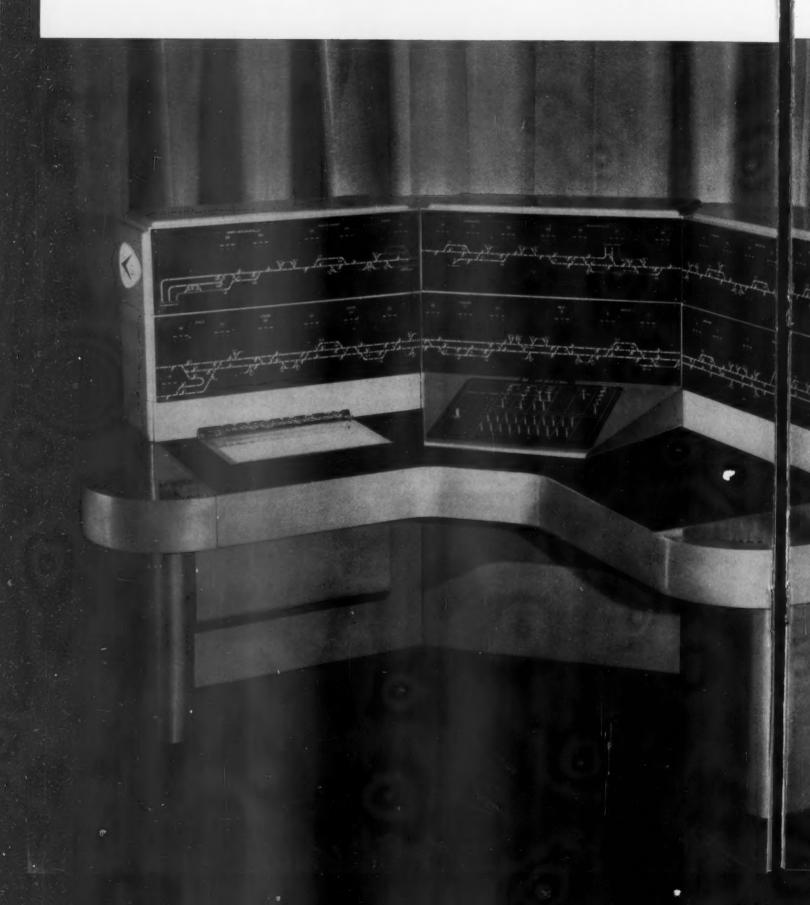
Typical rail wear profile graphs taken at both installations in July 1958 are shown above. The wear pattern is practically nil; except for flow of the soft surface decarburized metal, no changes are apparent.

The 106-lb rail installed in 1956 has been in service 24 months and has had approximately 12 million gross tons of traffic. The rail profiles taken and inspection of the rail in track indicate that this rail is going to prove very satisfactory. The rail installed in 1957 has carried approximately 5 million tons of traffic.

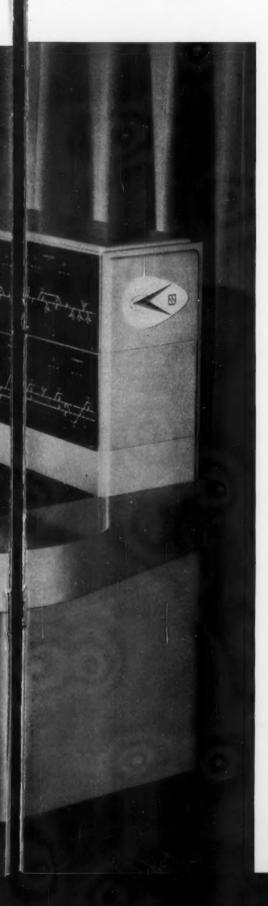
This rail will be continually observed. However, in view of the increasing price of rail and the need to conserve funds, it is our feeling that the use of this new 106-lb rail, with its excellent physical properties, will offer considerable savings, both in first cost and in actual usage. It also offers another economical rail section which can be utilized for secondary lines and for installations where secondhand rail is not available.

Through research, and the utilization of research developments and projects such as this, we feel the railroads should ever be alert for improvements which offer, through improved design features, possible economies.

New traffic control center...puts



dispatcher within arms length of any point on your system



ıts

UNION SWITCH & SIGNAL has pioneered the application of push-button science to railroad operations. Now it makes another major contribution to lower railroading costs. It introduces a completely new idea in traffic control—an idea that will enable you to further centralize control of your railroad and extend the economies of CTC over larger territories, at minimum cost. Key to these benefits is a new miniature control panel that enables just one man to control an entire railroad without moving his chair!



Smaller

With a miniature track diagram and modular construction, this new UNION traffic control panel is less than half the size of conventional panels. The basic unit, shown in the photograph, occupies a floor space only 4' 8" by 8' 11", yet it does the job of a conventional panel 35 feet long!

Simpler

All control levers and buttons have been removed from the frontplate of the panel. They now are concentrated in a small operating console directly in front of the dispatcher. This gives him true *finger-tip* control of any point in his territory. It simplifies his job . . . enables him to work at higher efficiency and to keep careful watch over larger territories.

More versatile

Any size panel is built up of identical modular plug-connected sections. A basic unit can be expanded easily at any time. This new control center can be applied to all types of interlockings, as well as to CTC; it can be used with any existing control system.

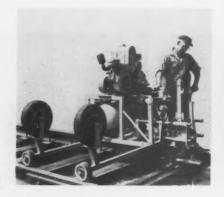
COMPLETE INFORMATION AVAILABLE. You know the benefits of CTC. You know how it makes single track do the job of double track . . . how it speeds traffic and keeps schedules reliable . . . how it pays for itself in 3 or 4 years. Now, learn how this new UNION Control Center will enable you to magnify these advantages. Get in touch with a Union Switch & Signal representative today.

"Pioneers in Push-Button Science"



SWISSVALE, PENNSYLVANIA

New Products Report



Spike Setter

A new mechanical spike setter eliminates hand work in setting spikes ahead of any type of spike driver. It is a self-contained, compact, pneumatic machine operated by one man. Power is supplied by a gasoline-engine-driven air compressor mounted integrally on the carriage. It is claimed that final operations of braking machine, straightening and firmly setting a spike takes less than two seconds. Almost no skill is required to operate machine. American Brake Shoe Co., RR Prod. Div., Dept. RA, 155 N. Wacker Dr., Chicago 6.



Spike Driver and Tie Nipper

A carriage equipped for use with a pneumatic spike driver and with built-in tie nipper is available. With Model 60 one man can nip the tie and drive the spikes on either side of both rails. The carriage is self-propelled in either direction by an air motor with air brakes that are automatically applied when travel buttons are released. The gun is supported in a swivel-mounted, telescoping boom which allows fast and precise positioning over the spike. Kalamazoo Mfg. Co., Dept. RA, 1827 Reed St., Kalamazoo, Mich.



Monorail Tamper

The Jackson Monorail Tamper is designed to increase tamping production of small section gangs. It is a one-man operated, multiple-tool machine made to tamp one end of the tie. This new light power tamper employs the same vibratory motors used in manually guided fourtamper outfits. Forward and reverse movements and raising and lowering of the workhead are hydraulically actuated, A gas-electric power plant supplies electric power to the tampers with sufficient extra horsepower in the air-cooled gasoline engine to take care of the hydraulic operations. The power plant has its own integral-platform base which can be easily removed from the tamper carriage for use in other work or for emergency power. A powered jack is incorporated in the main frame member for setting off and turning the machine. A portable light steel setoff is provided. In process of development is a method of dual operation to permit one man to control two machines hooked up mechanically. Both machines would then tamp the same tie, one on each end. A removable jack for power raising is also being developed. Jackson Vibrators, Inc., Dept. RA, Ludington, Mich.

New Herbicide

A new herbicide, designated Inverton 245, has been made available, which is said to promise effective weed and brush control even when applied while the foliage is wet. It is a 2,4,5-T product formulated in an invert emulsion which gives the mixture a thick creamy consistency. It is this, the manufacturer states, which causes Inverton 245 to cling tightly to branches and foliage. When sprayed, it leaves the nozzle in large particles so that drift is cut to a minimum. Dow Chemical Co., Dept. RA, Midland, Mich.



Spike Driver

The Spikemaster is now available with a "swinging gun mount." It is claimed that an important feature of this new development is the assurance that spike driving guns are positioned accurately over both rails regardless of variations in track gage or curvature. This is accomplished automatically by the use of flanged pilot wheels which are held to the rail head. Better control of the driving guns is claimed by the use of the new mount. Railway Maintenance Corporation, Dept. RA, Box 1888, Pittsburgh 30, Pa.



One-Man Spot Liner

A new portable and compact hydraulic "spot liner" claimed to be ideal for two-man section gangs is available. The 100-lb power plant is a 1-cyl, 2-hp gasoline engine mounted on a carriage designed to operate on one rail, with an outrigger for stability. The 100-lb lining device, a hydraulic ram, is carried on a separate roller that may be detached from the power-plant carriage. The cylinder delivers a maximum thrust of 22,000 lb at 1800 psi. Railway Track-work Co., Dept. RA, 3207 Kensington Ave., Philadelphia.



MAINLINE RADIO makes CTC work better on the C & E I

Efficiency has reached a new peak on the C & E I's main line between Danville, Ill., and Evansville, Ind.

The dispatcher's Central Traffic Control board shows him the approximate position of every train on the line.

And the Motorola Mainline Railroad Radio System at his fingertips permits him to talk to any train—moving or not—at any time.

With both CTC and Mainline radio, the dispatcher has the tools to get all the information he needs to carry out his job effectively. Now he can determine exactly where a train is and obtain information on speeds and conditions. The result: better "meets" and fewer train delays. With Motorola Mainline radio, your operation can have unbroken message traffic between dispatcher, wayside stations and all radio-equipped trains . . . true dispatcher control over every operation. Get all the facts on this complete railroad communications system from your Motorola Railroad Radio Communications Specialist. Write, phone or wire today.







MOTOROLA RAILROAD RADIO

Motorola Communications & Electronics, Inc., A Subsidiary of Motorola Inc., 4501 Augusta Bivd., Chicago 51, III.

WP Gets 'See Through' Yard Tower

Open-type support for the railroad's new facility at Stockton, Calif., does not restrict visibility of yard crews. The tower, placed in approximately the center of the yard, also permits yardmaster to view the entire yard operation. Use of precast and prefabricated members enabled tower to be constructed in 14 working days.

How to build a yard tower that doesn't obstruct the view of train crews operating at ground level? This was one of the problems confronting the Western Pacific engineering department when it set out to design a yardmaster's tower for its yard at Stockton, Calif.

"We wanted to erect the best possible elevated structure from the standpoint of practicability and effectiveness, especially one that would not restrict the visibility of yard crews in watching over activities in the yard area," explained F. R. Woolford, the Western Pacific's chief engineer. Object was to place the tower in approximately the center of the yard so the yardmaster could view the entire yard operation.

This location also allows him to see a number of individual switching leads in the vicinity as well as the handling of cars out of the yard.

It was decided to adopt an open-type supporting structure utilizing prestressed, precast concrete piles. Included are an equipment room of precast concrete sections and a prefabricated steel-frame control room.

45 Ft Above Rail

The 14-ft square control room is the topmost element of the structure. Its floor is 45 ft above the top of rail. This height was established to provide the optimum amount of visibility in all directions. The room is of prefabricated welded steel-frame construction with a timber roof. Outward-sloping walls combine steel-channel frame members with metal lath and plaster for both inside and outside finish. Studs are staggered with roll insulation woven between. Steel channels forming the base plates are anchored into the precast concrete floor slab.

The roof of the control room is framed with wide-flange beams, has a built-up gravel cover over an insulated steel deck. Full visibility for the yardmaster is provided by enclosing the entire perimeter of the control room with double-glazed win-

dow sash five feet high. The suspended ceiling is finished with acoustical board for sound-proofing purposes.

The floor slab extends beyond the exterior of the control room to provide a walkway on all sides that is protected by welded-pipe railings. Floor inside the room was covered with a linoleum wearing surface.

Equipment Room Is Below

Below the control room is a 9- by 14-ft equipment room. The walls of this room consist of four precast concrete wall sections framing into a poured-in-place concrete pilaster at each corner, all on top of a precast concrete floor slab. These walls also provide support for the control room above. Sanitary facilities are included on this deck.

The supporting structure consists of four 20-in. octagonal prestressed, precast concrete piles, one under each corner of the equipment-room floor slab. Precast concrete beams framed into the piles support a stair structure between the legs. The stairs are also protected by welded pipe railings.

Because of the prefabricated nature of the structure, piles had to be accurately placed. Since it was felt that driving piles with the desired degree of accuracy would be extremely difficult, they were installed in predrilled holes. The holes, made oversize, were drilled down to where adequate point bearing was afforded. The piles were then placed in the holes, properly alined, and concrete poured around them to fill the voids and also to furnish lateral support.

All prestressed and precast segments were made by a contractor and hauled to the project from an off-site casting yard. The prefabricated control room was assembled on the ground adjacent to the tower by WP welders.

With the aid of a 25-ton rubber-tired crane, the tower was erected in 14 working days. Temporary track crossings were utilized to provide maximum maneuver-

ability with a minimum of interference to yard operations.

The air-conditioned control room is completely equipped to eliminate any need for the yardmaster to leave the tower during his period of duty. Contact with yard crews is maintained through a yard talkback speaker-system, as well as radio. Space was included for expansion if television is ever used in the yard operations. Communication with the yard office is by intercom, telephone and a two-way pneumatic tube system.

Relocation of the yardmaster from the old location on ground level to the elevated tower site was accomplished with no interruption in his work or to yard operations.



OCTAGONAL concrete piles provide support for a precast-concrete equipment room and a prefabricated-steel control room. Legs were placed in predrilled holes which were then backfilled with concrete.

MODERN SAND HANDLING

for DIESEL LOCOMOTIVES on

THE MILWAUKEE ROAD, Aberdeen, S. D.

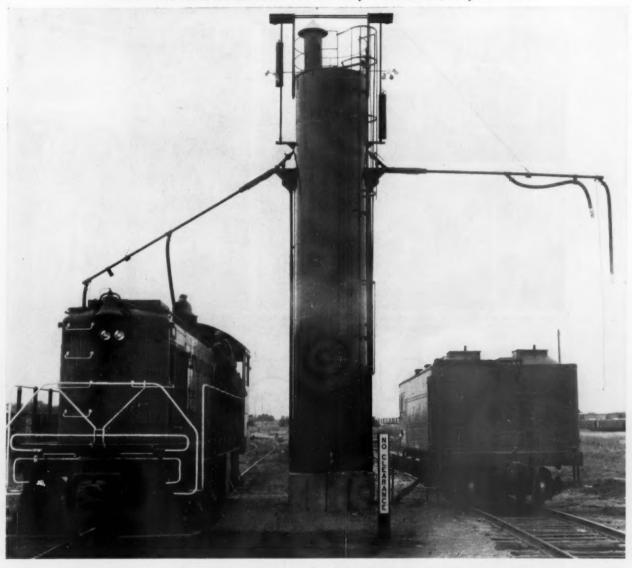


Illustration above shows ROSS and WHITE 40-Ton, 2 Track, Predried Automatic Sand Unloading, Elevating, Storing and Dispensing Plant for sanding top and side boxes of Diesel Locomotives.

ASK FOR BULLETIN No. 110

Canadian Representative: Railway & Power Engineering Corp., Ltd., Montreal

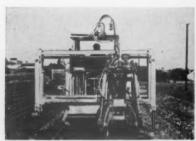
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CHICAGO DAILY NEWS BUILDING, CHICAGO 6, ILLINOIS

Now Big-Tamper

from a SPOT TAMPER





Spot Tamper clamps to rail, either or both lifting cylinders raise track desired amount. Cycle for tampering both ends of tie is about 35 seconds.





At each rail machine tamps at outboard and inboard positions, tamping tools extending under the rail.





Machine will tamp 75% of a turnout. With manifold provided for tamping balance with hand guns.

McWILLIAMS

SMPER

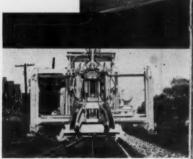
Equipped with jacks, a new standard of economy for smoothing, spot surfacing, and yard and terminal maintenance. Machine provides tamping quality equivalent to the McWilliams Multiple Tie Tamper. Ask for Bulletin ST-200.



PITTSBURGH 30, PA.

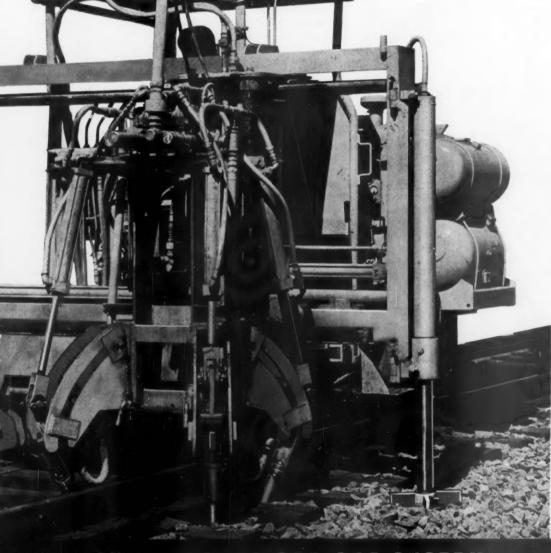






Raised on hydraulic spud, machine is easily turned for setting-off or changing direction.

Compaction





New R.M.C. Demountable Set-Off, any piece can be carried by one man.



Machine part way out set-off under its own power.



In the clear.

Current Railroad Questions

To What Extent Can Piggyback Replace Branch Line Operations?

This question was suggested by a person who thought it might be possible to improve branch line service and at the same time cut operating costs by substituting piggyback for most shipments, with only an occasional train operation for bulk loads. We have already printed two answers to the question in our August 25 column. Here are some more answers. Additional answers will be published in a subsequent issue. . . G. C. R.

'I do not think there is one universal answer'

"We do not have a great deal to contribute to this discussion because our experience with this type of service is limited. Our first piggyback operation was established in 1952 between Montreal and Toronto. Since that time, and very recently, it has been extended between Montreal and points in southern Ontario, as well as between Montreal and the Maritimes. To this we have added the handling of commercial operators' semitrailers in piggyback service between a few points in central Canada.

"Insofar as replacement of branch line

operation with piggyback is concerned, I do not think there is one universal answer. The volume and types of traffic, the length of a branch line, pickup and delivery and shed facilities required, as well as the existence of highway competitors in the area, must be considered for each case. The decision to substitute or not to substitute has to be made for each case on its own merits. Each proposal would require an economic study.

"The inherent advantage of piggyback service is that it combines the best aspects of both the rail and highway carrier, i.e., the relatively low rail transportation costs with handling and terminal advantages.

"In connection with the second question—as to whether or not a substitute piggyback service would tend to attract new business—this would depend on the cost to the shipper and the service provided. If there is a demand for additional transportation, it is possible that a piggyback service might attract new business, but again individual cases would have to be treated on their own merits."—S. F. Dingle, vice president of operation, CNR.

'Can't be done with TOFC in its present state'

"Piggyback service in its present stage of development could not hope to replace branch line operations due to the fact that not all stations in the country have piggyback service. In order to handle all types of traffic it would be necessary to have various types of equipment, and the origin and destination—dependent on whether it was inbound or outbound—must necessarily have the service available.

"There is another factor to be considered: Rail carriers cannot furnish piggy-

back service along the branch line operations unless they secure right or contract with motor carriers who are certificated to serve the points along the railroad. While this may not prove to be unsurmountable, we find that as applications for this type of substitution are filed by rail carriers the motor carriers that serve the area are filing protests asking the petitions be denied.

"The question of handling l.c.l. on branch lines in piggyback service can be worked out, since the traffic may be loaded to key points and then fanned out under contract to motor carriers for delivery to avoid the expense of operating way cars and furnishing the improved service.

"It may well be that future piggyback service will expand sufficiently to displace freight train operations on branch lines. However, at the moment, I do not think it is practical, due to the large number of points where piggyback service is not currently available."—B. F. Conway, freight traffic manager, Erie.

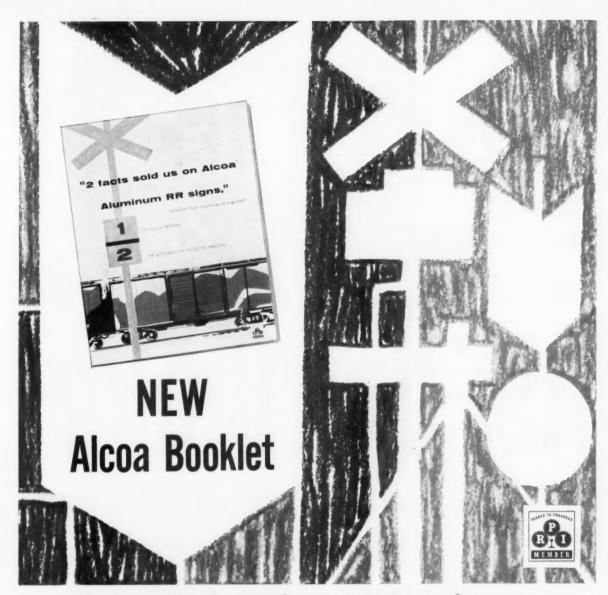
'Substitute service won't return traffic'

"We now provide to most secondary, as well as main line, stations a daily l.c.l. service in connection with our truck line subsidiary. Local freight service, either on a daily or tri-weekly schedule, serves carload shippers. The frequency of service is determined by the volume of traffic to be handled.

"We do not feel that substitute service

on branch lines for handling fresh fruit and vegetables would return the traffic. Stations on our branch lines are not heavily populated. In practically all cases this class of traffic moves from the heavier populated areas to the smaller communities in wholesalers' trucks."—R. J. Stone, vice president, operation, St. Louis-San Francisco.

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in frequent weekly issues of this paper and is devoted to authoritative answers to questions of interest to railroaders at all levels of responsibility. Readers are invited to submit questions, and when so inclined, letters agreeing or disagreeing with our answers. We will pay \$10 for questions suggested by readers, which are used in this column. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.



. . tells how aluminum signs save on maintenance

"We put 'em up... and leave 'em up." That's what one chief maintenance engineer says about signs and crossbucks of Alcoa® Aluminum.

And it's no wonder you can "install 'em and forget 'em." These tough, weather- and corrosion-resistant signs won't rot or warp. They never need protective painting. They can be reflectorized for high visibility day or night. They last twice as long. The message film won't delaminate even if punctured or damaged.

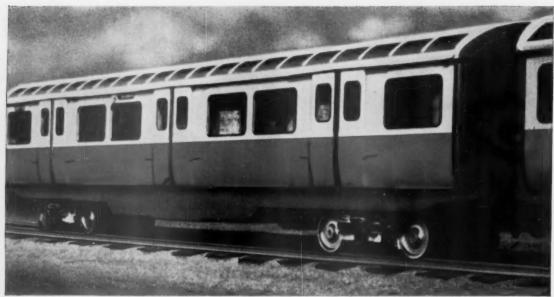
And the best part is that signs of Alcoa Aluminum cost just about the same as signs of inferior material—yet they save you much more in labor and replacement costs.

This bulletin is "must" reading for all who want to know more about the savings that are possible with modern signs and crossbucks of Alcoa Aluminum. It's packed with useful information on advantages, design, specifications, assembly and upkeep. Get this new booklet-send in the coupon. And for information on the growing use of strong, lightweight aluminum in boxcar doors, lading bars, lightweight trains, freight and passenger stations and other applications, call your Alcoa Distributor or nearest Alcoa sales office. Or write Aluminum Company of America, 2180-J Alcoa Building, Pittsburgh 19, Pennsylvania.



Your Guide to the Best in Aluminum Value

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Company	i i
Street	
City	Zone
State	



Now in use on the Metropolitan Transit Authority-Boston

ASF Unit Brake

- A self-contained, compact, low-cost unit with manual or automatic adjustment.
- Available in models for transit or railroad passenger cars.
- Easily accessible for inspection and maintenance.

Synonymous with Brake Development for over a half-century.

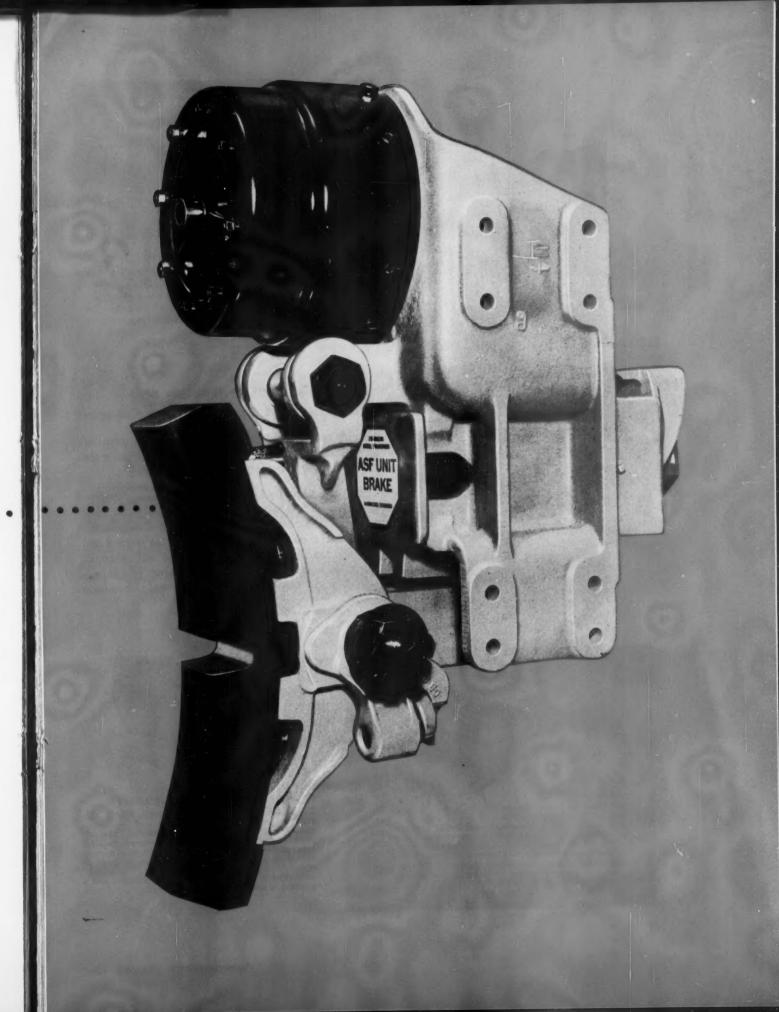
AMERICAN STEEL FOUNDRIES

Prudential Plaza, Chicago 1, Illinois

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Since 1912

LEADERS IN RAILWAY APPLIANCE PROGRESS

Experienced in Design and Manufacturing of Specialized Products

The nation's railroads are noted for many great transportation achievements . . . one of the most important being the efficient handling of the country's heavy bulk freight.

Since 1912, The Wine Railway Appliance Company has designed and manufactured many of the important parts of hopper, gondola, flat and box cars that make this handling function possible, as well as profitable, for the owners and users of the cars. In the years ahead, Wine will continue, through its experience, engineering know-how, and manufacturing skills, to keep pace with the needs of the railway industry.



A comparatively simple method of equalizing forces and "balancing" the conventional brake arrangement by replacing the dead lever connection to the truck bolster with the Wine Balancer—connected to the car underframe. A bracket and connector at each end of the center sill flange, engaging the dead lever, balances the brake forces by returning them to the underframe of the car.



CORRELATED HOPPER UNITS

The one-piece, cast steel frame unitizes each individual hopper into a structurally sound, functional assembly which assures positive door fit. The adjustable locks, cast steel hinges, and symmetrical tapered door flange make possible the only adjustable door fit permitting compensation for wear or common irregularities of construction. "Balanced" unloading is assured by dual door operation and a method of controlled flow.



DROP BOTTOM SPRING HINGES AND ADJUSTABLE LOCKS

Drop Bottom Gondolas equipped with these two Wine products provide the shipper and receiver of the lading with a positive closure and afford a fast, economical one-man operation, with selective single or multiple opening of doors.



CONTINUOUS LADING BAND ANCHOR

Wine's continuous offset bar for top-coping applications provides a secure anchor for lading bands every 7½" of its entire length. Permits the use of all types of banding material.



DROP END LOCKS AND END BALANCERS

The complete drop end combination from operating and security standpoints! Interlocked corners provide rigidity to keep the sides from spreading under load. The balancer incorporates the hinge function . . . permits a one-man, time and labor saving closure.



UNIVERSAL LADING BAND ANCHORS

Easily applied on all flat cars and gondolas, the Wine Universal Type Anchor features 360° rotation for tie-ins from any direction. Versatility of use permits welding on coping at important locations as well as mounting in the floor. Drop flush when not in use.



ADJUSTABLE HOPPER DOOR LOCKS

The adjustment feature allows compensation for construction differences and readily permits adjustments necessitated by wear. Wine Adjustable Hopper Locks are adaptable to built-up, structural hopper openings as well as cast steel frames.



Stainless Steel ELECTRIC SWITCH LAMP



The No. 2203 STAINLESS STEEL Electric Switch lamp has been proved in operation over five years. Lovell-Dressel developed the lightweight STAINLESS STEEL lamp to eliminate the disadvantages of the old style cast lamp. The body and all moving parts are absolutely non-corrosive! The Dressel STAINLESS STEEL lamp is easy to install. The squat design creates an extremely rugged unit. Low initial cost is less than cast lamps! Write now for catalog.

LOVELL-DRESSEL COMPANY, Inc.

OVER 90 YEARS OF PACE SETTING SERVICE TO RAILROADS

ARLINGTON, NEW JERSEY

Railroading



After Hours with

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RED-CAPPING FOR FREE—On the subject of slow and expensive handling of hand bag-

gage—raised here recently by Lew Sprague—Vice President Knox Bradford of the D&RGW tells me they're giving free red-cap service for their Denver-Salt Lake passengers. The passengers turn their luggage over to a red cap at either point—with no charge.

"In fact," Mr. Bradford goes on to say, "for those who spend the day in either city, we'll take care of their grips during the day and place them in the customer's space in the outgoing train in the evening."

Mr. Bradford is interested in experiments in the direction of improved service—and, if readers have any offer, I'll be happy to pass them along to him.

MORE ABOUT GAGES—Transportation Professor Hadly
Waters of Penn State relates our
standard gage to the early locomotives imported from Britain—
and the gage of those locomotives to that of the mine tramways. These two facts seem to be pretty definitely established.
But Professor Waters proceeds to trace the gage of mine wagons
to the highway vehicles then current—and their gage, he believes, came from that of the chariots of the Roman invaders.

At this point my bump of skepticism goes into operation—because there was an interval of some 500 years after the Romans pulled out of Britain, during which, if I read history correctly, there was mighty little wheeled transportation of any kind in Britain. Besides, how about the evidence from the AASHO publication mentioned here last week which indicates that the chariots' gage was much less than 4 ft 8½ in.?

Assistant Vice President Steve Gossage of the CPR has the impression that Pompeii ruts (contrary to last week's report) indicate a chariot gage of 4 ft 8½ in.—which, he says, is equivalent to the "passus" (double marching pace) of the Roman legions.

WIDER PENSION COVERAGE?—H. E. Stilley of Jacksonville, Fla., would like to

see a consolidation of railroads with principal truck lines—and an extension of the Railroad Retirement Act to include employees of all forms of surface transportation. In this way, pension income (and hence ability to pay pensions) would not be jeopardized by the shift of traffic from one form of transportation to another.

There's no doubt that it would be an advantage to give rail-road pensions a wider income base. There's a limit to the number of trips the pitcher can make to the same well—especially if the well's dimensions are decreasing all the time. It would also be a step to greater competitive equality if all forms of transportation were under the same pension system—instead of, as now, the railroads' paying three times the rate that their rivals do.

LET'S HAVE GAYER COLORS—The National Safety News, published by the National

Safety Council, has taken me up on brighter paint for freight cars—which I mentioned here recently. They like the idea, and hope it will spread to include stations. From what I've seen here and there, I suspect the idea, as an idea, is firmly implanted—and that all it needs to get a lot more action is a few more shekels in the till.

Reflective Train Control system gives greater safety with <u>lower sign costs!</u>



This economical system of roadway signing gives you improved operational safety twenty-four hours every day. It is called Reflective Train Control (RTC), and takes advantage of durable "Scotchlite" Reflective Sheeting to make vivid, colorful control signs that are as easy to see by night as they are by day. For at

night, when caught in an approaching headlamp beam, bright "Scotchlite" Sheeting clearly reflects the complete shape, color and message of every sign along the roadway. Trainmen can see these distinct warnings in time to act safely even in rainy weather... whenever the need for visibility is especially vital.



RTC is economical, too. With a central sign shop, only 1 to 3 men can efficiently produce signs for an entire system. Field crews are freed for other jobs.



Ease of fabrication with "Scotchlite" Reflective Sheeting means more signs produced in less time. Professional results are easy to get. Signs are uniform. Signs last longer and perform better.

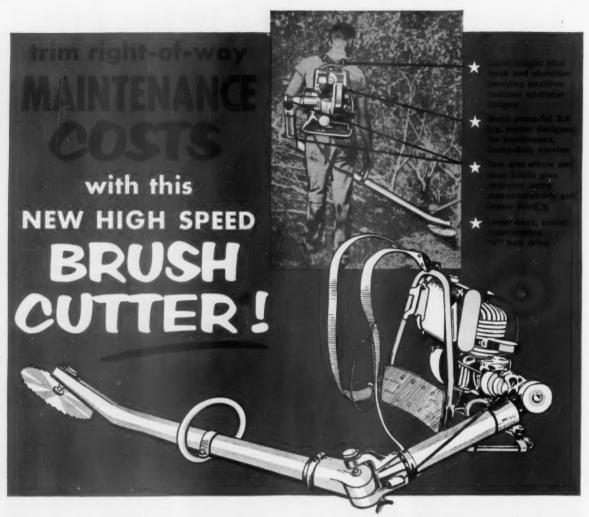


Maintenance costs decrease with RTC. No lights are needed. No field repainting either. Signs, like the above switch target, need only an occasional wiping.

Many leading roads now use Reflective Train Control and enjoy the twin benefits of greater safety with lower sign costs. Why not get the dollar-saving facts on modern RTC for your road now? Write for details to: 3M Company, Dept. FQ- 98, St. Paul 6, Minn. REFLECTIVE SHEETING

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Minnesota Minney & Mig. Co., St. Paul 6,
Minn. General Export & 9 Park Avenue, New York IA.

MINNESOTA MINING AND MANUFACTURING COMPANY-Where RESEARCH is the key to tomorrow



"Slash" is the word to describe what the new Southworth portable Brush Cutter does to right-of-way maintenance costs. One operator, plus this lightweight, versatile performer, does the work of eight men with brush hooks or scythes. The two big features that make this equipment so valuable are extreme maneuverability and "work horse" power. Exclusive saw arm elbow and knee joints provide easy cutting of brush, trees or limbs at any height within reach. Extra power permits cutting of trees up to 8" and larger, by notching.

The major portion of the Brush Cutter's 39 lbs. is carried comfortably on the operator's back...nature's saddle...where the weight is hardly noticeable.''V'' belt drive simplifies field maintenance, eliminates costly repairs, gear stripping, etc. Added features include automatic clutch, finger tip throttle control and large gas capacity for long hours of uninterrupted use. The cutting arm is easily disassembled in less than one minute for convenient transportation. Special 10" heavy duty circular saw is positioned for operator safety.

Write for descriptive bulletin and prices . . .

Maintenance Equipment Company *

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MECO HAIL AND FLANGE LUBINCATON
Doubles to quadruples curve rail and locomotive wheel flange life, by reducing friction
between rails and wheel flanges on curves.
Also makes possible higher speeds with
greater safety.



MACK REVERSIBLE SWITCH POINT PROTECTOR Prolongs the life of switch points about 4 times; then is reversed and again extends the switch point life for another similar period.



MECO POWER RAIL LAYER
Reduces labor cost to minimum in laying
Standard Rails, Long Rails, Continuous
Welded Rail. Operates efficiently with large
gang of 100 men or more and requires a
machine crew of only 3 or 4 men.

DON'T LET HOT BOXES

There is one way to reduce costly delays, equipment damage, right-of-way stoppages . . . and ten major railroads are using it.

You can protect your freight schedules (that's income), safeguard every foot of your right-of-way (that's capital)... besides saving maintenance dollars all along the line.

The SERVOSAFE® HOT BOX DETECTIVE* gives early warning by spotting overheated journals before they develop to trouble-making temperature levels.

Located at track-side, automatically scanning every journal box that passes, this dependable infrared device is on duty 24 hours, summer or winter, rain or shine. Train speed may be 6 to 60 miles per hour.

Without any misses — without slowing or stopping trains — the SERVOSAFE® DETECTIVE* precisely locates every potential hot box and instantaneously flashes this information to the control point. Overheating journals can be caught before damage results, and a permanent record of the relative temperature of every journal is available for reference.

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One of our engineers will be glad to present to you some interesting facts and figures. With these, you can evaluate the economic significance of SERVOSAFE® HOT BOX DETECTIVE* for your road. Please address:

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THE IMPROVED FAIR

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THAT LOCKS
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0 O 0 0 S RAILWAY A

Freight Operating Statistics of Large Railroads-Selected Items

				Locomot	ive Miles	Car	Miles	Ton-miles	(thousands)	F	load-locos	on lines	
	Region, Road and Year	Miles of	Train	Principal and		Loaded (thou-	Per	Gross excl.locos	Net rev. and	Service	-		cent
	(Poster & Maine 1959	operated		helper	Light	sands)	loaded	& tenders	non-rev.	Unstored	Stored	В. О.	В. О.
N N	Boston & Maine	1,559 1,560	213,751 217,596	214,231 221,695	3,664 7,593	7,663 8,731	59.4 63.6	456,822 589,144	210,644 239,490	63 83	17	3	9.1 3.4
N.e.	1957 Maine Central 1958 1958 1958	944 944	81,360 85,935	81,525 86,265	1,785 1,899	2,217 2,470	58.6 61.6	159,080 170,504	64,312 68,866	31 30	3	3 2	8.8 6.3
,	1957	1,739 1,739	238,034 266,081	238,034 266,131	13,324 16,050	9,762 11,221	64.7	656,436 737,390	258,290 302,543	76 85	3	10 13	$\frac{11.2}{13.3}$
	Delaware & Hudson1958 1957	764 771	145,275 161,477	146,446 166,271	1,171 6,139	7,002 8,777	61.3 67.8	504,560 629,312	240,825 331,675	33 38	3	6 2	14.3 5.0
· E	Del., Lack. & Western1958 1957	927 927	223,971 250,598	228,570 258,728	9,346 19,888	9,659 11,946	63.5 68.0	662,967 787,635	271,755 346,131	56 65		7	11.1
Region	Erie1958	2,207 2,207	471,847 585,262	474,223 589,077	10,007 15,360	26,230 32,374	66.2 67.5	1,678,599 2,074,974	640,788 825,197	164 169	8	2 2	1.1
	Grand Trunk Western1958	951 951	190,149 209,132	191,183 217,485	1,119	6,407 6,987	59.4 59.3	460,877 500,613	177,057 189,598	44 54	15 13	17 18	22.4
Lakes	Lehigh Valley	1,118	187,792 216,701	190,102 219,643	3,299 4,475	8,187 9,759	64.5 66.1	568,185 673,036	257,502 312,187	29 31		5	14.7 8.8
	New York Central	10,470 10,570	1,920,670 2,070,844	1,930,512 2,093,631	77,497 106,768	76,513 92,736	54.9 59.1	5.924,113 6,815,288	2,542,631 3,009,242	429 425	20	38 45	7.8 9.5
Great	New York, Chic. & St. L 1958 1957	2,155 2,155	532,111 688,041	535,181 702,165	3,811 5,407	23,882 29,207	61.3	1,725,827 2,071,597	718,196 920,428	128 181	26	17	2.5 8.2
	Pitts. & Lake Erie	221 221	51.996 62,819	51.996 62,819	43	2,093 2,918	61.7	193,592 255,063	118,935 159,486	17 13		3	15.0 7.1
	Wabash1958 1957	2,379 2,379	432,508 509,285	433,402 511,942	3,830 5,899	18,520 23,177	64.7	1,280,939 1,546,957	493,881 599,519	115 110		2 2	1.7
	Baltimore & Ohio	5,830 5,896	1,218,014 1,512,857	1,302,660 1,678,828	86,161 143,255	57,170 61,401	60.7 62.0	4,253,794 5,235,389	2,035,849 2,622,486	431 480	112	14	2.5 15.5
по	Bessemer & Lake Erie1958	208 208	40,421 64,612	43,090 68,468	100 284	1,715 3,456	60.6	212,389 409,804	140,682 265,796	13	î		
Region	Central RR Co. of New Jersey. 1958 1957	600 612	101,591 121,464	102,757 122,700	5,291 6,792	3,950 4,711	64.1	303,769 364,473	155,733 191,948	57 66		3	5.0
ern B	Chicago & Eastern Ill1958	863 862	126,504 118,272	126,504 118,272	2,637 4.562	4,789 5,371	62.3	365,742 391,768	177,498 190,260	26 27	* *	3 4	10.3 12.9
Easte	Elgin, Joliet & Eastern	236 236	59,360 84,116	60.009 84,697		1,833 2,612	61.7 64.5	149,344 212,740	79,820 117,799	33 37	9 2	2 4	4.5 9.3
200	Long Island	345 345	21,738 22,370	21,738 22,370	6,901 6,704	231 226	53.1 52.2	18,332 17,329	8,656 7,626	12 12			
Central	Pennsylvania System	9,899 9,914	2,468,520 2,793,220	2,599,145 3,009,391	164,975 233,660	106,251 126,040	61.7 65.8	8,106,548 9,394,900	3,792,323 4,618,121	687 815	91 50	80 206	9.3 19.2
S	Reading	1,302 1,303	265,361 357,427	266,891 359,825	8,770 12,425	10,159	57.2 62.6	887,611 1,112,658	452,479 601,463	135 167	12 20	41	21.8
	Western Maryland	844 846	136,979 162,153	140,536 167,336	6,369 8,332	5,365 6,607	59.4 63.5	477,770 571,224	256,559 328,661	39 51	5		2.2
	Chesapeake & Ohio 1958	5,066 5,067	1,130,152 1,530,363	1,133,692 1,536,506	21,352 30,897	54,155 71,402	55.9 55.3	4,848,590 6,515,615	2,734,940 3,693,639	597 587	3 5	19 72	3.1 10.8
Pocahonta	Norfolk & Western 1958 1957	2,109 2,110	598,327 775,221	637,344 831,296	49,019 62,268	31,277 41,244	56.1 57.9	3,034,948 3,971,983	1,667,116 2,218,794	174 233	49 13	8 17	3.5 6.5
cah	Rich. Fred. & Potomac 1958 1957	110 110	42.241 47,033	42,241 47,033	850 919	2,696 3,071	59.2 63.5	179,145 198,010	62,741 73,622	11 15	4		
Po	Virginian	608 611	141,874 178,925	144,319 181,865	3,605 4,677	7,265 9,197	53.2 54.0	709,809 905,532	398,747 517,500	50 58	15	14	17.7
	Atlantic Coast Line1958	5,297 5,283	666,844 763,100	666,844 763,112	6,107 9,087	22,210 23,613	55.2 56.3	1,678,397 1,772,639	693,907 749,836	120 131	8	2 5	1.5 3.7
	Central of Georgia	5,283 1,730 1,730	182,930 185,924	182,930 185,924	1,743	6,572 7,735	61.6	514,405 556,598	231,286 271,276	33 34		2 2	5.7 5.6
uo	Cinn., New Orleans & T. P 1958	334 336	118,870 133,561	118,870 133,561	706 773	6,973 8,453	58.6 64.7	475,758 545,910	193,447 235,615	22 25		10	31.3 7.4
Region	Florida East Coast	571 571	107,325 105,320	107,325 105,320	360	2,993 2,997	54.3 53.6	238,312 234,081	90,707 86,191	58 51		5	7.9 10.5
1 11	Gulf, Mobile & Ohio1958	2,717 2,717	249,629 261,920	249,629 261,920	90 154	12,821 14,125	63.7 67.5	915,286 985,423	421,065 472,708	86 87		5 4	5.5
Souther	Illinois Central1958	6,497 6,503	934,289 1,087,132	934,289 1,087,132	25,374 30,710	41,140 47,064	60.9 62.0	3,036,816 3,471,829	1,389,731 1,618,797	209 248	79 64	79 66	21.5 17.5
Sou	Louisville & Nashville(*)1958	5,680 5,686	845,846 1,017,661	846,746 1,022,676	14,994 18,255	33,090 37,462	57.9 61.6	2,608,899 2,859,947	1,258,479 1,443,079	154 178		13	1.3 6.8
	Seaboard Air Line	4,135 4,049	634,466 630,813	634,466 630,813	2,752 971	22,360 $22,832$	57.3 59.9	1,733,039 1,695,456	723,775 731,996	146 154		6	3.3
	Southern	6,249 6,251	784,508 838,036	784,724 838,096	8,963 9,739	34,482 38,373	61.1 65.4	2,439,098 2,614,176	1,094,784 $1,215,346$	175 187	1	15 12	7.9 6.0
	Chicago & North Western1958	9,291 9,252	766,676 859,084	766,676 859,084	10,024 8,779	28,970 29,700	61.7	2,161,830 2,229,565	869,100 891,000	169 180	2	10 12	5.6
uo	Chicago Great Western 1958	1,437 1,437	126,593 129,968	126,593 129,968	185 160	6,422	65.5 68.5	455,836 475,253	210,836 221,619	25 30		2	3.8 6.3
Region	Chic., Milw., St. P. & Pac1958	10,583 10,607	817,725 873,058	829,252 886,421	13,062 17,366	36,152 38,947	63.4 65.3	2,538,575 2,661,147	1,131,684 1,202,435	271 280	15	13 13	4.3
I.	Duluth, Missabe & Iron Range. 1958	562 566	91,146 165,808	91,468 166,078	693 790	4,904 8,377	51.2 51.1	545,808 891,516	338,017 536,169	74 68	27	5 8	9.4
este	Great Northern	8,262 8,289	881,898 1,071,343	885,531 1,075,865	24,876 23,050	37,635 46,014	66.3	2,844,096 3,499,863	1,349,927 1,780,796	262 233	76	6	1.9
thw	Minneap., St. P. & S. St. Marie 1958 1957	4,169 4,169	359,450 434,835	360,196 436,941	791 2,759	11,870 14,065	66.7 65.7	751,512 985,150	377,998 460,130	86 83	8	3 5	3.1 5.2
Northw	Northern Pacific	6,533 6,534	690,486 746,662	698,085 754,695	9,798 14,095	29,911 31,986	64.0 66.7 73.1	2,108,809 2,204,989	939,102 1,000,225	210 228	12 55	21	3.1 6.9
	Spokane, Portland & Seattle1958 1957	935 944	130,432 135,353	130,432 135,353	1,181	5,704 6,084	75.9	380,730 392,537	181,977 188,735	57 54			14.0
no	Atch., Top. & S. Fe (incl. 1958 G. D. & S. F. and P. & S. F.)1957	13,097 13,172	2,291,032 2,578,316	2,422,626 2,702,765	55,336 67,733	110,319 124,738	63.0 65.2	7,922,887 8,486,643	3,028,532 3,137,262	581 594	19	103 77	14.9 11.2 29.3
Region	Chic., Burl. & Quincy	8,698 8,750	911,782 983,100	908,554 979,096	22,577	39,314 43,702	65.2 66.4	2,676,718 2,980,216	1,168,360 1,331,334	129 146	28 39	65 31	14.4 3.8
	Chic., Rock I. & Pac1958 1957	7,560 7,576	970,830 975,275	967,689 974,611	3,516 2,377 22,274	38,555 38,504	60.6 60.8	2,873,423 2,826,713	1,196,647 1,157,609	179 174	9	12	6.5 7.2
estern	Denver & R. G. Wn	2,155 2,155	249,322 287,934	265,456 310,175	31,925	13,068 14,508 97,881	74.5 73.0 62.0	988,144 6 001 534	438,016 478,854 2,720,753	81 79 668	3	73	7.9
=	Southern Pacific	8,025 8,036	2,089,851 2,233,785 1,832,810	2,173,508 2,321,930 1,867,000	111,681 140,460 55,069	105,420 90,524	63.3 65.9	6,901,534 7,348,097 6,062,370	2,720,753 2,877,311 2,557,446	695 321	114	15 87	1.8
Central	Union Pacific	9,753 9,786 1,189	2,010,054 221,664	2,067,507 228,707	100,271 23,509	98,106 10,154	67.3 70.7	6,542,911 666,667	2,796,048 302,219	366 45	78	70	13.6
Cer	Western Pacific	1,190	246,222	261,975	12,579	11,912	71.4	768,363	338,845	46	+ 0	1	4.3
	Kanses City Southern 1958 1957	886 886	106,754 124,149	106,754 124,291	66 198	6,582 7,402	66.6 67.3	475,457 536,076	215,421 246,606	22 25		2	7.4
	Louisiana & Arkansas1958	746 746	66,818 78,216	66,818 78,247	259 259	3,160 3,783	63.5	250,781 294,887	115,932 137,651	17 17		2	2.5
Region	MoKansTexas Lines1958	3,059 3,172	238,483 245,656	238,483 245,656	2,262 2,554	11,221 11,567 47,569	61.2 64.8	819,784 791,290	381,282 357,711	79 77	16	iś	6.7
	Missouri Pacific	9,530 9,661	1,070.241	1,070,241 1,080,430	8,045 8,427 5,207	47,568 50,048	62.8 65.1	3,455,963 3,523,580	1,547,329 1,596,480 678,596	192 375 99	i	33 15	8.1 13.0
estern	St. Louis-San Francisco1958 1957	4,558 4,573	548,308 572,211	548,308 572,211	5,207 5,559	21,322 23,045 535	65.8 68.2	1,470,986 1,540,655 30,550	678,596 712,929 20,301	100		6	5.7
Wes	St. Louis-San Fran. & Texas1958 1957	141	14,679 15,782	14,679 15,782	1 600	506	68.0 63.9 67.7	39,550 35,897 881 768	20,301 16,479 394 163	2 2 53		**	
Southw	St. Louis Southw. Lines1958	1,554 1,554	304,568 328,738	304,598 328,754	1,609 1,555	13,581 14,961	67.7 69.8	881,768 954,466	394,163 426,660 813 168	56		2	3.1
80	Texas & New Orleans1958	4,271 4,285	598,351 622,061	598,351 622,061	630 687	26,184 26,120 12,084	62.2 63.8	1,875,891 1,846,375 883 498	813,168 809,490 331,442	136 141 39			4.9
	Texas & Pacific	1,822 1,822	238,277 283,217	238,277 283,217	2,014 4,436	12,084 $13,424$	60.9 59.9	883,498 999,781	331,442 367,564	45	- 0	2	2.2

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For the Month of June 1958 Compared with June 1957

			Freight o	ars on line		G.t.m.per	G.t.m.per	Net	Net.	Net	Car	Net	Train- miles	Miles
	Region, Road and Year	Home	Foreign	Total	Per Cent B. O.	train-hr. excl.locos. and tenders	train-mi. excl.locos. and tenders	ton-mi. per train- mile	ton-mi. per l'd car- mile	ton-mi. per car- day	miles per car- day	daily ton-mi. per road-mi.	per train- hour	loco. per day
New	Boston & Maine 1958 1957 Maine Central 1958	3,139 1,919 2,816	6,246 8,237 1,947	9,385 10,156 4,763	3.8 1.5 5.1	40,317 40,267 28,992	2,564 2,714 1,961	988 1,103 793	27.4 27.4 29.0	726 792 445	44.4 45.4 26.1	4,504 5,117 2,271	15.8 14.9 14.8	91.8 101.3 95.6
Na	N. 1., N. H. & Hud1958	2,092 3,793 3,075 6,778	2,431 11,602 15,150 4,715	4,523 15,395 18,225 11,493	4.6 4.9 2.0	29,367 44,534 43,945 61,978	1,988 2,758 2,771 3,494	803 1,085 1,137 1,667	27.9 26.5 27.0 34.4	504 580 567 667	29.3 35.5 32.6 31.6	2,432 4,951 5,799 10,507	14.8 16.1 15.9 17.8	99.6 115.5 118.7 130.3
Region	Delaware & Hudson	1,687 7,050 4,922	6,041 7,668 12,354	7,728 14,718 17,276	6.6 6.0 7.5 3.9	64,353 52,038 53,490	3,918 3,011 3,205	2,065 1,234 1,408	37.8 28.1 29.0	1,427 624 674	55.7 34.9 34.2	14,340 9,772 12,446	16.5 17.6 17.0	161.1 140 4 159.8 104.8
	Erie	12,605 8,860 6,710 5,378	12,824 19,670 6,821 7,076	25,429 28,530 13,531 12,454	6.0 3.0 5.7 6.3	71,305 70,589 54,157 51,445	3,593 3,582 2,437 2,406	1,372 1,425 936 911	24.4 25.5 27.6 27.1	831 979 450 505	51.3 56.9 27.4 31.4	9,678 12,463 6,206 6,646	20.0 19.9 22.3 21.5	132.2 91.2 94.6
Lakes	Lehigh Valley	8,589 4,131 80,072	7,844 9,471 63,882	16,433 13,602 143,954	$ \begin{array}{r} 10.1 \\ 5.2 \\ 7.4 \end{array} $	64,486 66,624 55,516	3,053 3,145 3,115	1,384 1,459 1,337	31.5 32.0 33.2	531 747 585 703	26.2 35.3 32.1 36.6	7,677 9,168 8,095 9,490	21.3 21.5 18.0 16.4	209.0 241.8 158.6 168.3
Great	New York, Chic. & St. L	58,230 12,452 8,567 9,312	85,637 10,184 17,189 2,831	143,867 22,636 25,756 12,143	3.1 12.7 8.1 7.4	53,987 60,470 53,983 62,712	3.337 3,288 3,065 3,741	1,473 1,368 1,362 2,298	32.4 30.1 31.5 56.8	1.058 1.209 310	57.3 59.7 8.8	11,109 14,237 17,939	18.6 17.9 16.8	129.1 125.7 97.1
	Wabash1957 1958 1957	4,277 10,788 9,486	8,840 8,683 10,257	13,117 19,471 19,743	8.2 5.8 4.4	61,431 64,684 65.915	4,073 2,973 3,046	2,547 1,146 1,180	54.7 26.7 25.9	405 846 1,022	11.0 51.0 61.1	24,055 6,920 8,400	15.1 21.8 21.7	153.4 131.6 162.7
SI .	Baltimore & Ohio	66,301 48,756 5,987	38,536 46,087 861 1 105	104,837 94,843 6.848	17.9 5.2 13.3 7.1	56,491 53,108 88,385	3,547 3,522 5,581 6,548	1,697 1,764 3,697 4,247	35.6 42.7 82.0 76.9	653 887 597 1,525	30.2 33.5 12.0 32.7	11,640 14,826 22,545 42,596	16.2 15.3 16.8 16.9	88.3 110.7 116.6 162.1
Region	1957 Central RR Co. of New Jersey. 1958 1957 Chicago & Eastern III	5,414 4,447 2,477 3,169	9,918 10,190 2,913	6,519 14,365 12,667 6,082	13.5 7.4 13.2	106,942 43,402 43,498 55,984	3,135 3,112 2,910	1,607 1,639 1,412	39.4 40.7 37.1	382 521 1,000	15.1 19.9 43.3	8,652 10,455 6,856	14.5 14.5 19.4	79.1 90.6 147.8
Eastern	Flgin, Joliet & Fastern1958 1957	2,603 7,938 7,149	3,352 4,450 9,290	5,955 12,388 16,439	10.2 6.2 6.2	60,542 22,502 21,973	3,334 2,640 2,671	1,619 1,411 1,479	35.4 43.5 45.1	1,049 215 231 103	45.5 8.0 7.9 5.2	7,357 11,274 16,638 836	18.3 8.9 8.7 7.6	136.0 63.1 82.4 120.8
Central E	Long Island	130,152 97,067	3,033 3,508 65,956 94,962	3,033 3,508 196,108 192,029	.5 .2 15.3 8.7	6,399 5,874 58,611 55,536	864 796 3,377 3,479	408 350 1,580 1,710	37.5 33.7 35.7 36.6	72 648 802	4.1 29.4 33.3	737 12,770 15,527	7.6 17.8 16.5	125.2 117.9 111.3
Cen	Reading	18,590 12,015 7,708	14,507 21,426 2,858	33,097 33,441 10,566	16.0 2.5 4.7	52,154 51,567 51,224	3,345 3,113 3,578	1,705 1,683 1,996 2,082	44.5 45.1 49.7 49.7	443 598 798 1,277	17.4 21.2 27.0 40.4	11,584 15,387 10,528 12,950	15.6 16.6 14.7 15.0	59.5 74.3 121.2 130.9
eu.	Chenapeake & Ohio1958	4 535 69,154 58,664 45,158	4,261 28,564 35,105 7,393	8,796 97,718 93,769 52,551	2.4 3.6 .8 4.3	52,788 82,232 82,181 91,635	3,619 4,314 4,286 5,206	2,433 2,430 2,859	50.5 51.7 53.3	927 1,333 1,013	32.8 46.6 33.9	17.995 24,299 26,349	19.2 19.3 18.1	66.4 85.1 101.7
Pecahontas Region	Norfolk & Western	35,738 150 75	11,413 1,133 1,149	47,151 1,283 1,224	3.0 2.1	90,414 93,111 93,799	5,256 4,245 4,214	2,936 1,487 1,567	53.8 23.3 24.0	1,528 1,743 1,917	49.1 126.5 126.0 30.0	35,052 19,012 22,310 21,861	17.6 22.0 22.3 15.3	118.5 99.4 112.1 69.2
Pe	Atlantic Coast Line1958	13,335 10,871 23,551	1,696 2,563 13,059	15,031 13,434 36,610	3.8 1.4 3.9	76,315 75,030 46,043	5,096 5,182 2,526	2,863 2,962 1,044 984	54.9 56.3 31.2 31.8	877 1,324 617 673	43.6 35.8 37.6	28,232 4,367 4,731	14.8 18.3 19.2	91.5 195.2 206.7
_	Central of Georgia	20,443 4,675 2,951 618	16,403 3,748 5,990 5,638	36,846 8,423 8,941 6,256	4.4 4.7 4.3 1.4	44,534 50,921 53,421 91,510	2,325 2,815 3,000 4,051	1,266 1,462 1,647	35.2 35.1 27.7	900 1,020 981	41.5 43.9 60.3	4,456 5,227 19,306	18.1 17.8 22.9	192.1 190.6 133.7
Region	Florida East Coast	360 828 400	4,768 2,739 3,014	5,128 3,567 3,414	1.1 1.2 .9	92,716 36,534 39,216	4,109 2,235 2,229	1,774 851 821	27.9 30.3 28.8 32.8	1,525 718 773 816	84.6 43.6 50.1 39.0	23,375 5,295 5,032 5,166	22.7 16.5 17.6 19.6	165.6 65.5 68.2 98.9
Southern 1	Gulf, Mobile & Ohio	7,752 5,807 28,746 26,389	9,864 9,798 19,774 24,712	17,616 15,605 48,520 51,101	7.2 7.5 3.3 2.2	71,962 73,506 57,925 56,087	3,669 3,763 3,280 3,228	1,688 1,805 1,501 1,505	33.5 33.8 34.4	1,004 963 1,049	44.5 46.8 49.2	5,799 7,130 8,298	19.5 17.8 17.6	103.9 95.4 105.8
Sout	Louisville & Nashville(*)1958 1957 Seaboard Air Line1958	37,552 28,247 18,402	13,895 19,842 10,133	51,447 48,089 28,535	7.4 4.9 3.2	52,337 50,993 54,038	3,091 2,816 2,790	1,491 1,421 1,165	38.0 38.5 32.4	768 946 826 932	34.9 39.9 44.6 48.6	7,385 8,460 5,835 6,026	17.0 18.1 19.8 19.5	201,1 197.0 161.7 150.9
	Southern	13,211 22,520 17,317	11,628 26,494 24,331	24,839 49,014 41,648 46,568	2.6 4.3 4.8 5.2	52,423 52,996 53,331 51,394	2,748 3,118 3,130 2,826	1,186 1,399 1,455 1,136	32.0 31.7 31.7 30.0	740 976 617	38.2 47.2 33.3	5,840 6,481 3,118	17.0 17.1 18.2	152,6 149.6 158.4
on	Chicago & North Western1958 1957 Chicago Great Western1958 1957	23,875 21,594 2,130 1,905	22,693 27,288 3,421 3,727	48,882 5,551 5,632	6.2 4.0 3.6	47.872 67.521 68,698	2,627 3,615 3,663	1,050 1,672 1,708	30.0 32.8 31.9	620 1,165 1,270	32.8 54.1 58.2	3,210 4,891 5,141	18.4 18.8 18.8	161.0 161.9 141.3
n Region	Chic., Milw., St. P. & Pac 1958 1957 Duluth, Missahe & Iron Range 1958	37,601 31,624 13,718	21,645 29,140 751	59,246 60,764 14,469	5.3 5.9 5.4	61,834 58,966 102,307	3.111 3,058 6,399	1,387 1,382 3,963 3,393	31.3 30.9 68.9 64.0	635 669 759 1.229	32.0 33.2 21.5 37.6	3,564 3,779 20,048 31,577	19.9 19.3 17.1 18.4	100.7 110.1 34.8 77.7
rester	1957 Great Northern	13,153 25,884 23,678 7,145	997 16,033 19,222 6,171	14,150 41,917 42,900 13,316	2.3 3.8 3.2 5.7	98,838 62,536 60,407 35,581	5,642 3,268 3,319 2,099	1,551 1,689 1,056	35.9 38.7 31.8	1,069 1,370 913	47.4 53.4 43.0	5,446 7,161 3,022	19.4 18.5 17.0	120.8 125.7 137.6
Northwes	Northern Pacific	6,655 20,046 20,026	8,480 12,950 15,533	15,135 32,996 35,559	3.9 4.8 3.2	48,821 63,402 59,083	2,279 3,056 2,962	1,064 1,361 1,343	32.7 31.4 31.3	1,008 935 934 1,112	46.9 46.5 44.8 47.7	3,679 4,792 5,103 6,488	21.5 20.8 20.0 14.7	170.1 111.5 89.6 87.8
	Spokane, Portland & Seattle1958 1957 Atch., Top. & S. Fe (incl. 1958	1,655 1,428 61,123 60,812	4,096 3,777 37,459 36,569	5,751 5,205 98.582 97,381	3.3 2.0 6.0 5.6	43,040 43,393 76,100 74,270	2,935 2,921 3,466 3,296	1,403 1,404 1,325 1,219	31.9 31.0 27.5 25.2 29.7	1,204 1,049 1,073	51.1 60.6 65.4	6,664 7,708 7,939	15.0 22.0 22.6	94.0 129.7 143.6
Region	Atch., Top. & S. Fe (incl. 1958 G. D. & S. F. and P. & S. F.) 1957 Chic., Burl. & Quincy 1958 1957 Chic., Rock I. & Pac 1958	23,278 19,991 17,082	18,361 22,536 29,043	41,639 42,527 46,125	3.8 3.7 3.8	62,943 64,273 58,915	2,943 3,041 2,973	1,219 1,285 1,359 1,238	30.5 31.0	949 1,055 923	49.0 52.2 49.1	4,478 5,072 5,276	21.4 21.2 19.9 19.8	147.5 161.7 187.8 184.6
estern	Denver & R. G. Wn	13,153 8,700 7,310 33,690	22,864 5,694 7,135 39,403	36,017 14,394 14,445 73,093	5.6 6.2 2.6 2.0	57,273 72,798 65,885 68,697	2,906 3,567 3,440 3,339	1,190 1,763 1,667 1,316	30.1 33.5 33.0 27.8	1,053 1,035 1,208 1,258	57.6 41.5 50.2 73.1	5,093 6,775 7,407 11,301	20.5 19.2 20.8	103.5 135.5 109.5
Central W	Southern Pacific	31,908 33,779 33,016	40,259 30,626 28,265	72,167 64,405 61,281	1.7 2.5 2.0	65,316 87,742 85,449	3,334 3,327 3,273	1,306 1,403 1,399	27.3 28.3 28.5	1,292 1,350 1,492	74.8 72.5 77.8	11,935 8,741 9,524	19.9 26.5 26.3	108.9 136.4 141.6
Cen	Western Pacific	2,723 2,364 2,587	3,181 3,642 4,311	5,904 6,006 6,898	2.3 2.6 5.1	79,346 78,605 91,294	3,023 3,131 4,462	1,371 1,381 2,021	29.8 28.4 32.7	1,737 1,932 995 1,103	82.6 95.1 45.7 49.2	8,473 9,491 8,105 9,278	26.4 25.2 20.5 19.8	185.7 206.4 175.3 180.7
mo	1957 Louisiana & Arkansas 1958 1957 MoKansTexas Lines 1958	2,257 2,946 1,644 5,963	5,344 2,679 3,453 10,655	7,601 5,625 5,097 16,618	3.6 6.3 5.6 7.2	85,512 75,017 73,575 55,741	4,330 3,757 3,781 3,464	1,992 1,737 1,765 1,611	33.3 36.7 36.4 34.0	690 890 1,051	30.3 38.5 50.5	5,180 6,151 4,155	20.0 19.5 16.2	161.8 170.0 109.3
n Region	Missouri Pacific	4,773 25,575 21,869	6,747 22,392 26,332	11,520 47,967 48,201	8.8 7.1 3.7	54,283 64,203 66,330	3,236 3,246 3,271	1,463 1,453 1,482	30.9 32.5 31.9	1,052 1,077 1,111	52.5 52.7 53.5	3,759 5,412 5,508	16.9 19.9 20.3 19.2	116.9 167.6 95.4 188.6
rester	St. Louis-San Francisco1958 1957 St. Louis-San Fran. & Texas1958	12,553 12,697	9,820 11,955 398 400	22,373 24,652 398 400	1.8 1.7 4.3 3.3	51,401 52,891 42,299 36,893	2,705 2,698 2,743 2,275	1,248 1,249 1,408 1,044	31.8 30.9 37.9 32.6	992 966 1,771 1,408	47.4 45.8 68.7 67.7	4,963 5,197 4,799 3,567	19.6 15.7 16.2	201.4 255.7 274.4
Southwestern	1957 St. Louis Southw. Lines	2,794 1,978 7,121	4,186 4,563 15,686	6,980 6,541 22,807	1.4 1.9 1.6	67,917 62,424 69,211	2,899 2,907 3,151	1,296 1,300 1,366	29.0 28.5 31.1	1,845 2,149 1,187	93.9 106.7 61.5	8,455 9,152 6,346	23.5 21.5 22.1	199.6 205.2 150.0
al .	1957 Texas & Pacific	6,058 3,779 3,532	15.084 6,088 6,766	21,142 9,867 10,298	1.5 3.6 3.3	61,828 80,194 77,013	2,988 3,721 3,543	1,310 1,396 1,302	31.0 27.4 27.4	1,258 1,137 1,229	63.6 60.8 74.9	6,297 6,064 6,725	20.8 21.6 21.8	155.7 206.8 224.3

^{*}Includes operations of Nashville, Chattanooga & St. Louis, merged into Louisville & Nashville on August 30, 1957.

Compiled by the Bureau of Transport Economics and Statistics, Interstate, Commerce Commission. Subject to revision.

50 Years Young

Fifty years ago in 1908, the railway equipment and supply industry organized the Railway Business Association, to "help the railroads"

Three years ago the RBA was revitalized and renamed the Railway Progress Institute . . . to better "help the railroads"

The record of the Institute's achievements speaks for itself . . .

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Continuous support for the railroads' efforts to obtain better legislative and regulatory treatment Full cooperation with the public relations activities of the railway industry.

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American Creosoting Corp.
American Steel Foundries
Anaconda Wire & Cable Co.
Apex Railway Products Co.

Birdsboro Steel Foundry &
Machine Co.
Blaw-Knox Co.
Brenco, Inc.
Buckeye Steel Castings Co., The
Budd Company, The
Buffalo Brake Beam Co.

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Chicago Railway Equipment Co.
Cleveland Graphite Bronze Co.
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of America

Davis Brake Beam Co.
Dearborn Chemical Co.

Edgewater Steel Co.
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Fairbanks, Morse & Co. Farr Co.

General American
Transportation Corp.
General Electric Co.
General Railway Signal Co.

General Steel Castings Corp. Greenville Steel Car Co. Griffin Wheel Co. Gunthorp-Warren Printing Co. Gustin-Bacon Manufacturing Co.

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Illinois Railway Equipment Co. Ingersoll-Rand Co. International Equipment Co., Ltd. International Railway Car Co. International Steel Co.

Kerite Company, The Kuhn, Loeb & Co.

LFM Mfg. Company, Inc., The

THE MEMBER COMPANIES OF THE

.. And Rarin' to go

RPI has become an effective force in transportation affairs

Credit for this record goes to the railway equipment and supply companies listed here . . . the companies which are today supporting, and participating in, the work of the Institute, demonstrating their willingness to go far beyond the usual "call of duty" as suppliers.

That is why we say that the RPI is "50 years young and rarin' to go"... to help the railroads in the momentous months ahead when they will be faced with many new challenges as a result of the passage of the Transportation Act of 1958.

MacLean-Fogg Lock Nut Co. Magnus Metal Corp. McConway & Torley Corp. Miller Lubricator Co. Miller Spring & Mfg. Co., Henry W. H. Miner, Inc. Modern Railroads Morton Manufacturing Co.

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Safety Industries, Inc.

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Standard Railway Equipment Mfg. Co. Superior Car Door Co. Symington Wayne Corporation

T-Z Railway Equipment Co. Thrall Car Mfg. Co.

Union Asbestos & Rubber Co. Union Carbide Corp. Unit Truck Corp. U. S. Plywood Corp. United States Steel Corp.

Vapor Heating Corp.

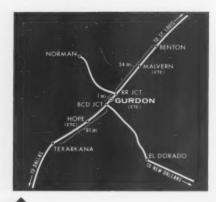
Waugh Equipment Co. Weir Kilby Corp. Western Railroad Supply Co. Westinghouse Air Brake Co. Woodings-Verona Tool Works

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RAILWAY PROGRESS INSTITU

38 SOUTH DEARBORN STREET, CHICAGO 3, ILLINOIS





THREE MACHINES become one on the Missouri Pacific. CTC machines at Hope and Malvern were moved to Gurdon. There the three were put together to form one control machine for the entire 122 miles of mainline between Benton and Texarkana. Mileages on the map show the extent of the controls of the three CTC machines.





How to Get More from Your CTC

Operating expenses can be considerably reduced by moving centralized traffic control machines together so one man can handle the territory formerly handled by two or more men. Although some consolidations require carrier links for handling CTC controls and indications, some require only the physical move of the machines.

Railroad operating expenses can be reduced by consolidating CTC control machines. Many such consolidations can pay for themselves in two years, or less.

The consolidations can be achieved by moving machines together, or by purchasing a new machine to handle all controls and indications previously handled by two or more machines.

When centralized traffic control was installed on many railroads, direct wire controls and limited use of carrier required that the control machine be at some point on the controlled territory. This has

changed since the advent of high frequency carrier systems.

Many railroads have CTC-controlled sections of line on which the control machines could be moved to one location. Such a move would permit one man to operate the combined machine, instead of the two or three men required to operate separate machines.

Here's how two railroads reduced their operating expenses by consolidating CTC controls.

The Missouri Pacific recently consolidated three CTC positions into one at Gurdon, Ark. Before the move, CTC operation between Benton and Texarkana was controlled from three locations. The Malvern CTC panel controlled 54 miles between Benton and Gurdon; the CTC machine at Gurdon controlled 7 miles through that town; and a CTC machine at Hope controlled 61 miles between Gurdon and Texarkana. Three sets of dispatchers or operators were needed to handle train movements over these 122 main line miles. Now, one set of dispatchers operates the CTC machine controlling the Benton-Texarkana main line.

The control-machine consolidation was made in two moves. First, the Malvern machine was moved to Gurdon, some 37 miles. Secondly, the Hope CTC machine was moved 31 miles to Gurdon. Both moves took about five hours each, including time to disconnect and reconnect the machines after the move by highway truck.

Prior to the actual move, temporary circuit connections were made at the bungalows at each siding so that the signals would be controlled similar to automatic block. Traffic during the move was all northbound, thus no meets were required. The nine passenger and 13 local and through freight trains over the Benton-Texarkana section are spaced to the move made between 3 p.m. and 8 p.m.

The Denver & Rio Grande Western produced considerable operating savings by replacing three CTC machines with one new control machine at Grand Junction, Colo. Formerly, the single-track main line between Dotsero, Colo., and Helper, Utah, was controlled from three points. The Funston, Colo., machine controlled 74 miles; a second machine at Grand Junction controlled 78 miles of main line; and a CTC machine at Green River, Utah, controlled 133 miles. By consolidating controls of the three machines into one

new machine at Grand Junction, the road reduced the number of dispatchers required to direct train movements over the 285 miles of main line.

In this installation, the CTC machines from Funston and Green River were moved to Grand Junction. Each move took approximately six hours, during which time trains were operated by CTC controls. The Rio Grande constructed a small control machine with two-position levers for the control of switches and signals during the machine moves. There was no delay to trains.

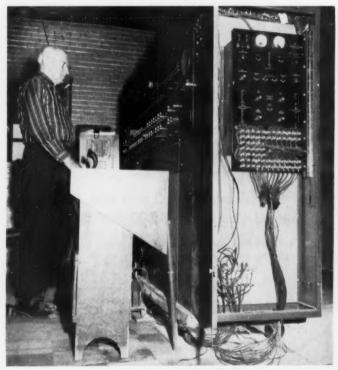
After the two CTC machines were moved to Grand Junction, the controls, including switch and signal levers, were transferred to the new control machine with a double-deck track diagram. Carrier equipment was installed to handle controls and indications between Grand Junction and former control points at Green River and Funston.

Many roads are cutting operating expenses by consolidating dispatcher positions in territories where train movements are directed by timetable and train orders. This type of consolidation is considered relatively inexpensive. The only requirement is to provide a communications (telephone) circuit for the dispatcher from his

new location to his train-order territory. In many instances, he talks over a carrier link to his former dispatching point. This carrier circuit is tied-in to the physical circuit there, enabling him to talk to way stations as before.

Similar carrier circuits may be provided to transmit CTC controls and indications. Thus, CTC machines need not be located on the territory they control. The Boston & Maine recently consolidated several dispatcher positions at Boston, Mass. Two of the positions involve operating CTC machines, which are now, respectively, 67 and 73 miles from the territories they control. The two territories are in the Boston division, with headquarters at Boston. The B&M management felt it was better, from a supervisory standpoint, to have the CTC dispatchers at division headquarters. The Seaboard Air Line has made similar moves of CTC machines to division headquarters.

Thus this trend to consolidate dispatchers at division headquarters can be accomplished economically by using carrier to bring telephone circuits, as well as CTC controls and indications, to division headquarters. From a supervision viewpoint, all train dispatching can be centralized at division headquarters, which keeps the division superintendent promptly informed.



FIRST STEP in moving a control machine is to put it up on casters, and provide temporary wiring connections which can be easily disconnected. Here, the Hope, Ark., CTC machine on the MP is ready for its move. During the preparatory work trains ran as usual.



CTC MACHINE is rolled up onto waiting truck for its ride to Gurdon, the new location. In this move, only three hours elapsed from the time the machine was disconnected until it was back in service.



HEATER
MAINTENANCE

WAINTENANCE

ENDS

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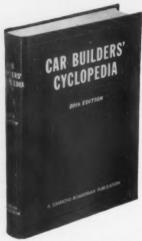
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The old bridge consisted of seven girder spans and one deck truss span. The modern replacement structure consists of five deck plate girder spans: one 45'6" long, two of 77'0", and two of 69'6". A total of 189 tons of structural steel went into the new bridge which was designed, fabricated and erected by American Bridge.

The procedure followed in replacing a span was to set each new girder without removing any more of the old structure than was absolutely necessary. When the break was made, the new girder spans were set between old girders or trusses. Prefabricated deck sections (ties, guard rails and tie pads) were then placed on the new girders and made ready for the rails. The entire operation was completed with only *four* interruptions of railroad traffic, for an average of only 6 hrs. 26 mins. per span.

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MARKET OUTLOOK at a glance

Carloadings Drop 12.7% Below Previous Week's

Loadings of revenue freight in the week ended Sept. 6 (which included the Labor Day weekend) totaled 563,351 cars, the Association of American Railroads announced on Sept. 11. This was a decrease of 82,081 cars, or 12.7%, compared with the previous week; a decrease of 82,766 cars, or 12.8%, compared with the corresponding week last year; and a decrease of 116,300 cars, or 17.1%, compared with the equivalent 1956 week

Loadings of revenue freight for the week ended August 30 totaled 645,432 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS

For the week	ended	Saturday,	August	30
District	195	8 19:	57	1956
Eastern Allegheny Pocahontas Southern Northwestern Central Western Southwestern	91,5 108,9 55,3 111,1 104,1 124,4 49,8	73 146, 55 64, 59 123, 12 122, 75 120,	036 1: 458 6 352 1: 586 1:	25,681 55,443 64,958 27,031 22,024 90,309 58,920
Total Western Districts	278,4	15 296,2	224 31	1,253
Total All Roads	645,43	32 745,6	20 78	14,366
Commodities: Grain and grain products Livestock Coal Coke Forest: Products Ore Merchandise I.c.I. Miscellaneous	54,39 5,61 116,66 6,41 37,46 56,84 51,48 316,54	11 6,7 55 139,9 13 11,1 66 40,9 15 84,9 17 56,3	775 1 712 14 71 1 182 4 196 7 134 6	31,252 0,439 10,470 1,206 18,629 3,630 3,147 15,593
August 30 August 23 August 16 August 9 August 2	645,43 633,68 625,99 618,58 622,20	759,2 750,6 740,4	40 77 40 76 71 71	4,366 0,413 9,644 5,207 0,287

Cumulative total, 35 weeks 19,582,670 24,284,774 25,025,546

IN CANADA—Carloadings for the seven-day period ended August 21 totaled 76,678 cars, compared with 75,321 cars for the previous sevenday period, according to the Dominion Bureau of Statistics.

		Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada	12		
August 21, 1958		76,678	24,582
August 21, 1957		86,264	31,685
Cumulative Totals:			
August 21, 1958		2,335,024	910,311
August 21, 1957		2 569 161	1 071 349

New Equipment

FREIGHT-TRAIN CARS

► Chicago & North Western.—Ordered 1,000 40-ft, 6-in. all-steel box cars from Pullman-Standard. Cars will be equipped with 8-ft doors. Delivery will start Oct. 20 and will continue at a rate of 90 cars per week. It's the largest freight car purchase by C&NW since 1956. No cost figures were released but estimates placed the total at more than \$7,000,000. Improvements and increased efficiency brought to C&NW services and operations in the past two years made the volume purchase possible, according to President C. J. Fitzpatrick.

New Facilities

- ▶ Atchison, Topeka & Santa Fe.—Plans to install centralized traffic control supplemented by an automatic train stop system in lieu of automatic block signaling and automatic train stops on 5 miles of double track between East Shopton and East Fort Madison, Ia. The new CTC will provide for operation by signal indications in both directions on both main tracks. Application for approval has been filed with the ICC.
- ► Chesapeake & Ohio.—Will purchase 11 electronic hot box detector units from Servo Corporation of America. C&O has had one detector in operation at Norge, Va., since November 1956. A second unit will be installed at Clifton Forge, Va. Ten more installations will be made as soon as delivery can be obtained.
- ► Reading.—Has completed, at a cost of \$540,000, installation of new facilities at Pier 14 of the Port Richmond Marine Terminal, Philadelphia. The new facilities increase ore unloading capacity at the pier by up to 85 per cent. They include new lightweight trolleys and buckets on two ore unloaders, together with new scale mechanism for weighing ore as it is unloaded.
- ▶ Wabash.—Has applied to the ICC for permission to install centralized traffic control in lieu of automatic block signaling on single track between MP 144 and MP 169, 25 miles. Also included in the application are modifications to interlockings at Gibson City, Lotus, Lodge and Mansfield, Ill.

Maintenance Expenditures

➤ Six Months Expenditures Down 13.1%.—Expenditures by Class I roads for maintenance of equipment, way and structures were down about \$220.9 million for the first six months of 1958, compared with the first half of 1957, according to ICC Bureau of Transport Economics and Statistics report summarized below:

Maintenance of Way & Structures	6 Months '58 \$ 603,140,025 859,455,597 1,462,595,622	6 Months '57 \$ 712,313,503 971,248,509 1,683,562,012	% Change -15.3 (-11.5 -13.1
	June '58	June '57	% Change
Maintenance of Way & Structures	104,778,249	126,239,396	-17.0
Maintenance of Equipment	139,870,015	157,945,577	-11.4
Totals	244,648,264	284,184,973	-13.9

O



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Fifteen to Get Harriman Awards

E. H. Harriman Memorial Awards will be presented Sept. 17 to 15 railroads and affiliates which established outstanding safety records in 1957. The presentations will be made at the Hotel Roosevelt in New York City before some 200 railroad officials and leaders in the safety field.

The awards this year will consist of three gold medals, which will go to the three railroads which had the best 1957 overall safety records, and 12 certificates of commendation.

The New York, Chicago & St. Louis will receive the gold medal for Group A, representing the largest railroads. The Duluth. Missabe & Iron Range will be awarded the medal for Group B, comprising medium-size roads. The medal for Group C, including the smaller carriers, will go to the Bessemer & Lake Erie.

Certificates of commendation will go to each of the three Class I railroads which set the safest mark in their respective regions, as follows:

• Group A-East, Pittsburgh & Lake Erie; South, Illinois Central; West, Northern Pacific.

• Group B-East, Wabash; South, Central of Georgia; West, St. Louis Southwestern.

• Group C-East, New York, Susquehanna & Western; South, Clinchfield; West, Texas Mexican.

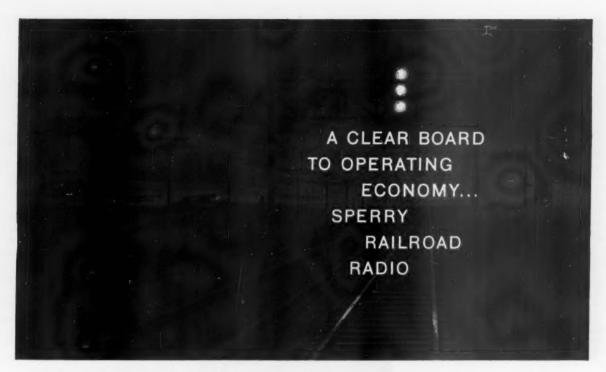
Switching and terminal companies selected to receive certificates of commendation are the Kentucky & Indiana Terminal, among the large firms, and the New Orleans Terminal, in the smaller group.

For the second consecutive year the Pullman Company will receive a special certificate of commendation for transporting, in conjunction with the railroads, some 73 million travelers about 45 billion passenger-miles in the years 1952-57 without a passenger fatality.

James G. Lyne, editor of Railway Age and chairman of the Harriman Awards Committee, will present the medals and certificates. Cyril Ainsworth, president of the American Museum of Safety, will preside over the awards dinner.

In addition to the railroad awards, William P. Yant, research director of the Mine Safety Appliances Company, will be presented the Arthur Williams Memorial Medal for individual achievement in safety. Albert S. Regula, retired vice president of the General Time Corp., a member of the committee, will present the award.





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Uniform Container System Proposed

Two of the transportation industry's biggest suppliers have joined forces to develop a uniform container suitable for freight shipments via flatcar, truck and ship.

General American Transportation Corp. and Fruehauf Trailer Co. announced an agreement under which Fruehauf is licensed exclusively to build and sell trailers and multi-purpose containers specifically designed for use on General American's new Clejan piggyback flatcars.

Production of the containers may begin within a matter of weeks, one spokesman indicated. It is planned to build containers in four sizes, the smallest being 17-ft. Among other potential customers, freight forwarders have already indicated an interest in the containers for use in Plan 3 piggyback (for which they must furnish their own equipment).

The General American-Fruehauf tieup reemphasizes the importance being attached to container developments by a number of suppliers, shippers and carriers.

William J. Stebler, president of General American, termed increases in piggyback freight shipments over the past few months "the beginning of a tremendous swing which will be stepped up in the months ahead. We are convinced that the Clejan car and uniform containers will be the ultimate rail links in an integrated freight system."

William E. Grace, executive vice-president of Fruehauf, agreed. The two companies, he said, "feel that the time is ripe to pool our engineering and selling resources to develop this new cost-saving

concept among the leading competitive freight carriers. The interchange of a standard freight container by rail, truck and water carriers offers the mechanical means of obtaining this objective."

More than a year ago, Fruehauf, Southern Pacific and Piggy-Back, Inc., demonstrated the possibilities of the Clejan car



THIS CONTAINER, shown undergoing tests last year, is similar to those Fruehauf will soon begin turning out for General American. Container above moves onto flatcar on rollers (power coming from air-operated winch), though other methods can be used. Standard container adaptable to rail, truck or ship is hope of backers of new plan.

for container transport (RA, Aug. 5, 1957, p. 23). Since then, General American purchased Piggy-Back, Inc., which held the U.S. patent rights on the Clejan system.

The Clejan car itself will handle either trailers or containers interchangeably without need for changes in car design or equipment.

General American and Fruehauf cited a host of advantages for the Clejan-container pairing:

- More economical operation than conventional box car or over-the-road truck movement, especially on long hauls.
- Removal of trailer chassis and tires for savings in capital costs and elimination of needless weight.
- Avoidance of certain costly terminal operations.
 - Less pilferage and damage to cargo.
- Elimination of export packing and crating charges.
- Quicker loading and turn-around time for ships, reducing wharfage and dock charges.
- Fast door-to-door service to shipper and consignee.
 - Simplified bill of lading procedures.
 - Greater flexibility in interchange.

Clejan flatcars are already in operation on the Southern Pacific, Erie, Kansas City Southern and New Haven. And General American recently arranged for lease of cars to United States Freight Co. and Republic Carloading and Distributing Co., two of the nation's largest freight forwarders (RA, Aug. 18, p. 36).

North American May Diversify

Diversification, within reason, may play a greater role in North American Car Corporation's future.

The company, according to Maj. Gen. E. C. R. Lasher, president and chief executive officer, is "keenly interested in broadening our operations by acquiring new properties consistent with sound financing and continued profits."

Present expansion studies, he told the New York Society of Security Analysts, are being limited to such fields as tank farms, private truck leasing and similar non-regulated phases of transportation. North American's policy, he emphasized, "does not contemplate acquisition of any property which would make us a carrier and bring us under the aegis of the Interstate Commerce regulations."

North American has historically been a railroad-oriented operation. But, Gen. Lasher declared, "now is the time for us to consider moving into other fields. One of the things that may influence our course is our belief that transportation industries

must move more and more toward full integration. It should eventually become possible for a shipper to send his goods to any part of the country on a single bill of lading and expect them to travel by the most efficient and economical routes regardless of the type of carrier involved."

Developments in piggyback, he said, represent a sizable step into the first phase of integration. Agreements on rate divisions and other practical details are in the works. And "the development of a uniform container system would certainly help immensely in completing the revolution that is already underway."

As for North American's current position, Gen. Lasher told the Security Analysts that corporation revenues and net income from operations are both higher than ever and still climbing.

"You have no idea how pleasant it is," he concluded, "for me to stand before this group on the heels of a recession and not have to explain a decline in profits. Under the circumstances, even our stock cars, as far as I'm concerned, have the windward aspect of a bouquet of roses. We are in good shape."

Ex Parte 212

(Continued from page 9) disturbance to the general rate structure and also produce needed revenues.

Another railroad proposal, to reduce free time at ports, fared not so well. The carriers suggested a four-day maximum at all ports, excluding Saturdays, Sundays and holidays. The commission noted that free time on water-borne freight now varies anywhere from five to 20 days—and said the record in this case didn't justify disturbing practices which have been in effect for at least 25 years.

Elsewhere in its wrap-up of Ex Parte 212, the commission approved a 10 per cent increase in existing charges for diversion or reconsignment, left intact the 5 per cent increase in plant and terminal switching charges authorized last February, and raised from 5 per cent to 10 per cent the increase in charges for stopping cars to partially unload or to complete loading.



J. Warren Lawson Reading



Thomas H. Ramsey, Jr. Reading



Herbert J. Lobb, Jr. Reading



John W. DeMoyer, Jr. Reading



Byron C. Cassel Reading



Oscar P. Benjamin Reading

People in the News

ALASKA.—R. H. Anderson, general superintendent of transportation, Rock Island, Chicago, appointed general manager, Alaska, effective August 15, to succeed John H. Lloyd, returning to the Rock Island.

CHICAGO & EASTERN ILLINOIS.—Robert A. Jordon appointed assistant freight sales manager, New York, succeeding E. H. Schoet, who retired July 31. Kerl Church named assistant freight sales manager, Evansville, Ind.

George J. Kendrick, valuation engineer, promoted to assistant comptroller, Chicago.

T. J. Cartwright appointed perishable freight sales manager, and E. E. Gordon named assistant freight sales manager, both at Chicago.

C. J. Cunningham named assistant freight sales manager, Milwaukee.

CHICAGO & NORTH WESTERN.—The following appointed master mechanics: J. E. Brehm, St. Paul, Minn.; H. K. Cox, Clinton, Ia.; C. D. Hill, Huron, S. D.

COPPER RANGE.—Edward A. Miller appointed auditor, Houghton, Mich., to succeed Fred A. Miller. who died July 12.

INTERSTATE COMMERCE COMMISSION.—H. Neil Garson and B. Franklin Taylor, Jr., appointed associate general counsel. Arthur J. Cerra named assistant general counsel.

Francis A. Silver appointed associate general counsel. He had been chief of the commission's Transport Mobilization staff which was abolished August 31.

LOUISVILLE & NASHVILLE.—Edward M. Blankner named division freight agent, Nashville, Tenn., to succeed Charles M. Cox, who retired July 31.

The following appointed freight traffic agents: John J. Houlihan, New York; Frank W. Oslie, Detroit; Sam H. Wilhoite, Chicago. David F. Jones named district freight agent, Indianapolis, Ind. S. Kindred Johnson appointed general agent, Pittsburgh.

Lon M. Dunford appointed general agent, Montgomery, Ala., to succeed Chris A. Wagner, who retired August 31. W. Rolph Gregory appointed freight traffic agent, St. Louis. Roy F. Bell named district freight agent, Tulsa, Okla.

MINNESOTA TRANSFER—ST. PAUL UNION DEPOT.

John L. Jensen appointed chief engineer of these roads, St. Paul, Minn., succeeding Norman F. Podas, retired.

MISSOURI-KANSAS-TEXAS.—Reiph O. Johnson appointed chief mechanical officer, Parsons, Kan., succeeding Horry S. Twrner, retired. R. C. Hassel, communications engineer, appointed assistant chief engineer, communications and signals, Denison, Tex., succeeding Mr. Johnson. L. I. Neormyer, assistant communications engineer, Parsons, replaces Mr. Hassel at Denison and is succeeded by G. R. Taylor.

MISSOURI PACIFIC.—S. P. Lawrence appointed assistant general freight agent—rates, Houston, Tex., succeeding D. M. Camp, deceased.

Gardner J. Wilkes, traffic analyst, appointed

Gardner J. Wilkes, traffic analyst, appointed traffic manager, Southern district, Little Rock, Ark., succeeding Oscor W. Williams, retired. Bernhardt A. Schmitt, special passenger representative, named assistant general passenger agent, St. Louis, replacing E. Eurl Spencer, promoted. Mr. Williams' retirement and Mr. Spencer's promotion were announced in RA, Aug. 11, p. 39.

P. D. Trucy, division engineer, Kansas City Terminal division, transferred to the Eastern division, with headquarters remaining at Kansas City, Mo., to succeed L. L. Wollis, appointed general roadmaster-construction and assigned supervision of track construction in the double hump retarder yard at Kansas City. Mr. Tracy's successor is J. E. Mortin, assistant division engineer, Louisiana division, Monroe, La., who in turn is replaced by W. H. Shideler.

5. O. Selder appointed general freight agent, Houston, Tex., succeeding W. J. Whitaker, resigned to become trade promotion manager, Lake Charles (La.) Harbor & Terminal District.

NEW YORK CENTRAL.—R. F. Batchman appointed assistant superintendent diesel shop, Collinwood, Ohio.

C. G. Marks, road foreman, Corning, N.Y., appointed trainmaster, Syracuse division, Oakfield, N.Y.

Joseph P. McAvoy, acting assistant trainmaster at Grand Central, New York, appointed general stationmaster there, succeeding Edward G. Fischer, who retired August 31.

O. Oliveri appointed assistant transportation superintendent—labor relations, Boston & Albany, Springfield, Mass.

F. A. Francis appointed general supervisor of contracts, New York, succeeding R. N. Etzold, who retired August 31.

READING.—J. Warren Lawson, general freight traffic manager, Philadelphia, elected vice president—freight traffic, succeeding Herry B. Light, who retired August 31. Thomas H. Rumsey, Jr. freight traffic manager, succeeds Mr. Lawson. Herbert J. Lobb, Jr., assistant freight traffic manager, replaces Mr. Ramsey. Joseph F. Leibrandt, general freight agent, promoted to assistant freight traffic manager. John D. Grier, assistant general freight agent, named general freight agent, New York, named assistant general freight agent, Philadelphia.

Byron C. Cossel, assistant to president, named comptroller of the company, succeeding Donald B. Stein, who retired August 31. Oscar P. Benjamin, office manager, president's office, succeeds Mr. Cassel as assistant to president.

Mr. Cassel as assistant to president.

John W. DeMoyer, Jr., assistant engineer, maintenance of way, named assistant chief engineer—maintenance, Philadelphia, succeeding to the duties of Archer P. Crosley, engineer maintenance

of way, who retired August 31. Abolished title of engineer maintenance of way.

RUTLAND.—Stephen A. Clifford, general sales manager, Rutland, Vt., assumed direction of the sales and service department on September 1, succeding Guy D. Lurrabee, who has joined Seatrain Lines (RA, Aug. 25, p. 31).

Supply Trade

American Railway Car Institute has moved to 200 East 42nd street, New York 17.

Canadian Car Company Limited will shortly close its Turcot plant, Cote, St. Paul, where railway rolling stock for world-wide export has been produced since early in 1900, and will move the operations and much of the equipment to the company's Dominion plant in Ville St. Pierre. The Dominion plant is undergoing modernization and expansion, at a cost of \$15,000,000, with completion of the program expected by next spring. The Turcot property is to be sold.

William E. Rothfelder, assistant manager, Commercial Research division of Inland Steel Company, has been promoted to manager, succeeding William B. Gilmour, resigned. Morris Caminer, market analyst, advanced to assistant manager.

Penetryn Systems, Inc., of Cleveland, Ohio, and Albany, N.Y., have appointed C. H. Anderson as their representative on various midwestern and eastern railroads.

Roy A. Robichaud has been named railway finishes representative for the Atlanta regional sales office of the Finishes Division of the Du Pont Company.

D. E. Clisbee has been appointed general commercial sales manager of the Graybor Electric Company, Inc., at New York. Mr. Clisbee was formerly manager at Hammond, Ind. G. J. Kennedy, general commercial sales manager, appointed district sales manager at Queens Plaza, New York District.

C & D Batteries, Inc., has named Power Operated Products, headed by Harvey J. Poplis, as the sales and service organization for C & D in Cincinnati, Ohio.

Griscom Bettle, Jr., has been appointed sales representative of the Disc Brake section of the Railway Division, of the Budd Company. Mr. Bettle was formerly a Railway Division sales representative specializing in sales and demonstration of the Budd Rail Diesel Car.

OBITUARY

C. E. Kinnaw, sales and service representative, Northwestern territory, Hennessy Lubricator Company, died August 25 in Santa Ana, Cal.

You Ought To Know...

- The Great Southwest Railroad is scheduled for completion in December 1958. The 16.5-mile line will serve the Great Southwest Industrial District in the Dallas-Ft. Worth, Texas, area. Road will tie the district to the Chicago, Rock Island & Pacific and the Texas & Pacific. Estimated cost: \$1,582,000. (RA, June 16, p. 43.)
- Missouri Pacific's Thrift-T-Sleeper service is still going strong. The car, running St. Louis-Denver on the "Colorado Eagle," is operating at peak capacity almost every day. MoPac, once considering a post-Labor Day cutoff, has decided on continuation of the low-cost sleeping car service indefinitely.
- Its 100,000th demurrage-free freight car will be shipped by the Container Corp. of America from its Philadelphia plant on Sept. 17. CCA's carhandling record, described as "almost unparalleled in railroad history," has been achieved by cooperation of all departments in the company's eight Eastern Division plants, and of the railroads serving them.
- The one-billionth dollar in railroad unemployment benefits was paid out Sept. 5, a little more than 19 years after the program was inaugurated. Both the number of beneficiaries and the benefit payment total have varied widely during that time. The lows: 5,000 beneficiaries and \$547,000 in payments in 1943-44. The highs: 506,000 beneficiaries in 1949-50; \$169,000,000 in payments in 1957-58. Over the 19 years, the average weekly payment has climbed from \$8.40 in 1938-39 to almost \$40 in 1957-58.
- One-day faster freight schedules are being provided by Canadian National between Montreal-Toronto and western Canada. The speed-up will permit third-morning delivery in Winnipeg, fourth-morning in Saskatoon, fifthmorning in Edmonton, and sixthmorning in Vancouver.

- Train consolidations announced by the New York Central include continued operation of the "20th Century Limited" and the "Commodore Vanderbilt" as a combined train between New York and Chicago. Sixteen other trains serving Cleveland, Boston, Buffalo and other midwestern cities will be consolidated into eight.
 - ► Canadian National will experiment this winter with one transcontinental passenger train daily instead of two. The "Super Continental" will continue to make the run. During the summer vacation months, CNR will restore the second train, the older "Continental."
- Wabash and New York Central have granted options on a 13½ acre site in Toledo, Ohio, to the Toledo-Lucas County Port Authority. The authority plans to construct two grain elevators, costing a total of \$11.8 million, on the site.
- Zanesville, Ohio, has become the 17th city in the B&O's TOFCEE network. The handling of highway trailers on flatcars is now available between Zanesville and such centers as New York, Philadelphia, Baltimore, Washington, Toledo, Cincinnati, Louisville, Indianapolis, St. Louis, and Chicago.
- Erie is recalling 100 employees in the first major car maintenance program undertaken by the road in more than a year. Reason for the freight car reconditioning program: Erie foresees an upturn in car loadings later this year. The work will be done at the road's new Meadville, Pa., shop, which will turn out a minimum of eight high-grade box cars per day in full production.
- Railway Express has been approved as an International Air Transport Association air cargo sales outlet. REA began its IATA operations Sept. 1. While international air waybills will be prepared by REA at 162 IATA-approved offices in 39 states, the District of Columbia, and Montreal, traffic for world-wide destinations actually will be originated at more than 13,000 express offices across the nation.
- Price increases of about 3.75 per cent on rails and track accessories have been put into effect by U. S. Steel, following similar increases by Bethlehem Steel. Higher labor costs were blamed for the increases.

- "All the railroads need is a chance to fight with the same weight gloves," IC President Wayne C. Johnson told the University of Wisconsin School of Banking recently. He stressed the need for less government regulation and the institution of user charges on competing forms of transportation that use publicly provided facilities. But he warned: "Nothing will destroy the railroads more surely than reliance upon government help."
- A "substantial reduction" in the New Haven's deficit by the end of the year is looked for by NH's President George Alpert. He says he is optimistic because he believes the economy has leveled off and "there seems to be a slight improvement in the last few weeks."
- The Brotherhood of Railroad Trainmen will mark its 75th anniversary by holding its annual convention in the founding city, Oneonta, N. Y., Sept. 23.
- Burlington has received permission from the Illinois and Wisconsin regulatory commissions to discontinue operation of passenger trains 45 and 52 between Savanna, Ill., and the Wisconsin-Minnesota state line. The trains, which now operate Chicago-Minneapolis, will be kept in Chicago-Savanna service. Burlington estimated its annual loss on the trains at \$100,000. The road hopes to drop the Savanna-Minneapolis part of the run Sept. 28.
- Reduced maintenance costs are expected as a result of a colorful face-lifting of New York City's elevated railways. The New York Transit Authority plans to finish more than five miles of elevated structure, 31 stations, and 40 bridges with two shades of a newly-developed green aluminum paint. In addition to the current program, the TA hopes to paint over 180 miles of running overhead structures within the next three years.
- The Illinois Commerce Commission has approved an agreement under which Alton & Southern trackage at East St. Louis will be used by the Cotton Belt to enable it to reach its passenger station at Valley Junction. Cotton Belt will be charged \$1 per passenger train using the tracks. A&S revenue from the agreement won't add up very fast—Cotton Belt operates just one train daily in each direction between East St. Louis and Pine Bluff, Ark.

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Dividends From the M/W Forces

The engineer maintenance of way was wearing a smile of satisfaction as he greeted a caller. "I'm doing all right," he said, "I've just been told by the president that I can put in some additional ties that weren't in our original budget." The figure he mentioned was substantial. "That's the third increase I've had in the past month," he added.

"You know," he continued, "management is coming through on its promises. Our M/W budget for this year was made up conservatively. In spite of the fact that business this year has been disappointing, we have been allowed to hold to our original budget. Early in the year I was told that additional money would be made available if and when business started to pick up. Well, it has started to pick up and already I have more money to spend than I expected."

This road is one that has made phenomenal progress in reorganizing and mechanizing its maintenance of way work. This year it has already spent more for maintenance machines than in any previous year in its history. Its equipment budget for 1959 will be even larger.

The men who are making the policies on this road do not spend money indiscriminately. They

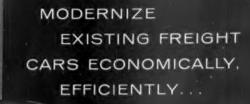
never allow themselves to forget their obligation to the stockholders. Among other things, that obligation, as they see it, requires them to encourage and promote policies that will assure adequate maintenance of the properties even during years of subnormal business. Equally important, however, is the fact that they believe, with the equipment and know-how available today, they can maintain the properties adequately while making dramatic savings, compared with the cost of former methods.

Management of this caliber is forging an entirely new approach to maintenance of way work. Traditionally the maintenance forces have been regarded as a millstone around the neck of management as it struggles to make profits for the shareholders.

Such an attitude can, and does, have a vitiating effect on the initiative of maintenance officers. Those affected by it can only stand by in envy as they listen to their more fortunate colleagues on other roads describe the advances—and savings—they are making with the means available today. Restrained on their own roads by a myopic attitude toward expenditures in their departments, they are forced into a piecemeal approach to modernization, with the result that only a fraction of the potential savings is being realized.

Not all maintenance officers exhibit the same degree of aggressiveness in promoting cost-saving policies. Progress in this direction has been most pronounced on those railroads where management has lifted the maintenance forces out of the stepchild category and regards them as a useful, and profit-producing, member of the railroad family.

SAVINGS—PLUS GOOD MAINTENANCE: A shift in thinking is involved in arriving at this new concept of maintenance. The first step is to stop looking on the maintenance forces as a parasitical appendage whose sole objective is to siphon large quantities of money from the treasury. With this notion out of the way it is not difficult to regard these forces in an entirely different light. It is now possible to see that, given the necessary support and encouragement, they can become a means of producing savings that may be figured in terms of so much per share of stock. And they will produce these savings while adequately maintaining the properties.



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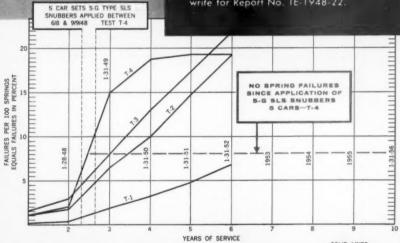
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